

UNSW

THE UNIVERSITY OF NEW SOUTH WALES

Undergraduate Handbook

2006

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Introduction

Introduction

The Undergraduate and Postgraduate Handbooks are designed as a detailed source of information for prospective and current students who are seeking information about studying at the University of New South Wales.

The Handbooks contain extensive information about all the **programs (degrees)** and **plans (disciplinary streams)** offered at UNSW. Program and plan outlines are presented by faculty and students should refer to the relevant faculty section for program and plan requirements and related information.

The Undergraduate and Postgraduate Handbooks also provide information on some of the most **important administrative rules and procedures** at UNSW.

It is important that students read the '**General University Rules & Student Information**' section in the Handbook, which details these rules and procedures, prior to the information contained within faculty sections. This section also contains the 'Schedule of Undergraduate Programs 2006' or 'Schedule of Postgraduate Programs 2006', which lists all programs offered by UNSW, and the University's 'Tuition Fee Schedule'.

Additional copies of the Undergraduate and Postgraduate Handbooks are available for sale at the UNSW Bookshop: (+ 61 2) 9385 6622 or www.bookshop.unsw.edu.au/handbooks.html

Further Information

While the University has attempted to make this information as accurate as possible at the time of going to print, students should note that information is also available online at:

www.handbook.unsw.edu.au

It is recommended that students consult the **Online Handbook** for the latest information regarding approved programs and plans.

The Online Handbook also contains up-to-date information about which **courses (subjects)** are available at UNSW. This includes course descriptions and timetabling information.

While the Undergraduate and Postgraduate Handbooks have been designed as a detailed source of information regarding University rules and procedures, the Handbooks should be used in conjunction with other University publications containing rules and procedures, especially the UNSW Student Guide and online information available at: <http://my.unsw.edu.au>

International students should contact the International Office for a copy of the international students' prospectus: (+61 2) 9385 6996 or www.international.unsw.edu.au in of any

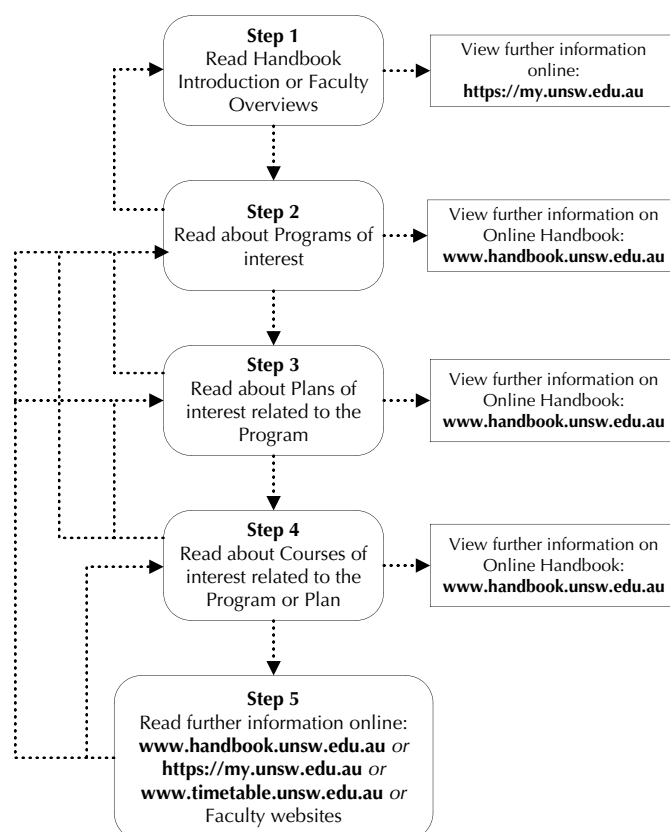
Students interested in studying at the Australian Defence Force Academy (UNSW@ADFA) should obtain a copy of the ADFA Handbook: (+61 2) 6268 6000 or www.unsw.adfa.edu.au/student/handbook/index.html

Key to Abbreviations Used in this Book:

If you are uncertain of any terminology relating to studying at UNSW, please refer to the **Glossary** at the end of this publication.

CS	Commonwealth Supported places available in this program
L	Local fee places available in this program
I	programs available for International fee paying students
CCH	class contact hours
F	full-time
HPW	hours per week
L	lecture
UOC	units of credit
P/T	part-time
S1	Session 1
S2	Session 2
T	tutorial/laboratory
WKS	weeks of duration
X	external
X1	Summer Session
X2	Winter Session

How to Read the Handbook – Navigation Guide



General University Rules & Student Information

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Academic Calendar for 2006

Please note: The University's Academic Calendar for 2007 is currently under review. Please refer to the myUNSW website for up-to-date information <https://my.unsw.edu.au/student/resources/AcademicCalendar.html>

Faculties Other than Medicine, AGSM and University College, ADFA

Summer Session	2006
Summer Session (9 weeks)	12 Dec 2005 to 23 Dec 2005
Xmas Recess	24 Dec 2005 to 2 Jan 2006
Summer Session continues	3 Jan 2006 to 17 Feb 2006
Session 1	
Session 1 (14 weeks)	27 Feb 2006 to 13 April 2006
Mid-session recess	14 April 2006 to 23 April 2006
Session 1 continues	24 April 2006 to 9 June 2006
Study Period	10 June 2006 to 15 June 2006
Examinations	16 June 2006 to 4 July 2006
Mid-year recess	5 July 2006 to 23 July 2006
Session 2	
Session 2 (14 weeks)	24 July 2006 to 22 Sept 2006
Mid-session recess	23 Sept 2006 to 2 Oct 2006
Session 2 continues	3 Oct 2006 to 3 Nov 2006
Study Period	4 Nov 2006 to 9 Nov 2006
Examinations	10 Nov 2006 to 28 Nov 2006

Public Holidays

	2006
New Year's Day	Monday 2 January
Australia Day	Thursday 26 January
Good Friday	Friday 14 April
Easter Saturday	Saturday 15 April
Easter Monday	Monday 17 April
Anzac Day	Tuesday 25 April
Queen's Birthday	Monday 12 June
Labour Day	Monday 2 October
Christmas Day	Monday 25 December
Boxing Day	Tuesday 26 December

Faculty of Medicine

	2006
Medicine I, II	
Teaching Period 1	27 Feb to 28 Apr
Mid-Session Break	14 Apr to 23 Apr
Recess	1 May to 7 May
Teaching Period 2	8 May to 30 Jun
Mid-Year Break	3 Jul to 23 Jul
Teaching Period 3	24 Jul to 15 Sep
Recess	18 Sep to 2 Oct
Teaching Period 4	3 Oct to 24 Nov
Medicine III	
Teaching Period 1	27 Feb to 28 Apr
Mid-Session Break	14 Apr to 23 Apr
Study and Examination Period	1 May to 14 May
Teaching Period 2	15 May to 7 Jul
Mid-Year Break	10 Jul to 23 Jul
Teaching Period 3	24 Jul to 15 Sep
Recess	18 Sep to 2 Oct
Teaching Period 4	3 Oct to 24 Nov
Medicine IV	
Summer Teaching Period	16 Jan to 10 Mar
Teaching Period 1	13 Mar to 12 May
Mid-Session Recess	14 Apr to 23 Apr
Teaching Period 2	15 May to 7 Jul
Mid-Year Break	10 Jul to 23 Jul
Teaching Period 3	24 Jul to 15 Sep
Recess	18 Sep to 2 Oct
Teaching Period 4	3 Oct to 24 Nov
Medicine V	
Summer Teaching Period	16 Jan to 10 Mar
Teaching Period 1	13 Mar to 12 May
Mid-Session Recess	14 Apr to 23 Apr
Teaching Period 2	15 May to 7 Jul
Mid-Year Break	10 Jul to 23 Jul
Teaching Period 3	24 Jul to 15 Sep
Recess	18 Sep to 2 Oct
Teaching Period 4 (Elective)	3 Oct to 24 Nov
Medicine VI	
Teaching Period 1	Elective – variable dates
Teaching Period 2	20 Feb to 2 Apr
Recess	3 Apr to 9 Apr
Teaching Period 3	10 Apr to 21 May
Teaching Period 4	
Hospital Program	22 May to 2 Jul
Campus Program 2	3 Jul to 14 Jul
Recess	17 Jul to 23 Jul
Teaching Period 5	24 Jul to 3 Sep
Teaching Period 6	4 Sep to 13 Oct

Important Dates in 2006

January

W	4	UNSW Info Day

February

M	27	Session 1 commences (faculties other than Medicine, AGSM and University College, ADFA)

March

F	3	UNSW Payment Due Date for all Session 1 fees
F	10	Last day to enrol in Session 1 courses
F	31	Census Date for Session 1 Last day for students to discontinue without financial penalty from Session 1 courses Last day for students to finalise arrangements for HECS-HELP and FEE-HELP.

April

F	14	Commencement mid-session recess
M	17	Commencement AVCC Common Vacation week
F	28	Last day for students to discontinue without academic penalty from Session 1 courses

May

T	9	Publication of the provisional timetable for the June examinations
W	17	Last day for students to advise of examination clashes
T	30	Publication of the Final Timetable for the June examinations

June

F	16	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA

July

M	3	Commencement AVCC Common Vacation week
T	4	Examinations end for faculties other than Medicine, AGSM and University College, ADFA
W	5	Commencement mid-year recess
M	24	Session 2 commences (faculties other than Medicine, AGSM and University College, ADFA)
F	28	UNSW Payment Due Date for all Session 2 fees

August

F	4	Last day to enrol in Session 2 courses
Th	31	Census Date for Session 2 Last day for students to discontinue without financial penalty from Session 2 courses Last day for students to finalise arrangements for HECS-HELP and FEE-HELP

September

S	2	UNSW Courses and Careers Day
F	15	Last day for students to discontinue without academic penalty from Session 2 courses
S	23	Commencement mid-session recess
M	25	Commencement AVCC Common Vacation week

October

T	3	Publication of the provisional timetable for the November examinations
W	11	UNSW Postgraduate Expo
W	11	Last day for students to advise of examination clashes
T	24	Publication of the Final Timetable for the November examinations

November

F	10	Examinations begin for faculties other than Medicine, AGSM and University College, ADFA
T	28	Examinations end for faculties other than Medicine, AGSM and University College, ADFA

Schedule of UNSW Undergraduate Programs 2006

The range of programs offered by the University is indicated in the tables below, listed by faculty. For details of the programs, please consult the relevant faculty section of this Handbook.

Please refer, in addition, to the '2006 Tuition Fee Schedule' which follows the 'Schedule of UNSW Undergraduate Programs 2006'.

This information is current as at 31 August 2005 and is subject to change.

Table Category	Description
Program	Name of degree program – also see Glossary.
Award	Degree/s awarded in this program – also see Glossary.
Code	Four digit program code.
Total UOC	Total units of credit required to complete program.
2006 Entry	Program availability for students commencing in 2006.
Hons +	Additional units of credit are required for Honours.
Fee Category - CS	Commonwealth Supported places available for this program.
Fee Category - L	Local fee places available for this program. Please note that the availability of Local fee places for these programs is not guaranteed.
Fee Category - I	International fee places available for this program. Please note that the availability of International fee places for these programs is not guaranteed.

Program	Award	Program Code	Total UOC	2006 Entry	Hons +	Fee Category		
						CS	L	I

FACULTY OF ARTS & SOCIAL SCIENCES

Arts	BA	3400	144	✓	✓	✓	✓	✓
Arts	BA(Hons)	3401	192					
Arts (Dance / Education)	BA(Dance)BEEd	3408	192	✓	✓	✓	✓	✓
Arts (Media and Communications)	BA(Media)	3402	144	✓	✓	✓	✓	✓
Arts / Education	BABEd	4055	192	✓	✓	✓	✓	✓
International Studies	BInSt	3413 – 3416	192					
International Studies	BInSt	3424	192	✓	✓	✓	✓	✓
Languages	DipLang	3417	42	✓		✓	✓	
Music	BMus	3425	144	✓	✓	✓	✓	✓
Music	DipMus	3418	42	✓		✓	✓	
Music / Arts	BMus BA	3427	192	✓	✓	✓	✓	✓
Music Education	BMusBEEd	3426	192	✓	✓	✓	✓	✓
Social Science	BSocSc	3420	144	✓	✓	✓	✓	✓
Social Science (Criminology)	BSocSc	3422	144	✓	✓	✓	✓	✓
Social Work	BSW	4031	192	✓	✓	✓	✓	✓
Social Work / Arts	BSW BA	4035	240	✓	✓	✓	✓	✓
Social Work / Social Science	BSW BSocSc	4036	240	✓	✓	✓	✓	✓

FACULTY OF THE BUILT ENVIRONMENT

Architecture	BArch	3260	264	✓		✓	✓	✓
Architecture / Arts	BArch BA	3262	288	✓		✓	✓	✓
Architecture / Social Science	BArch BSocSc	3263	288	✓		✓	✓	✓
Science Architecture	BSc(Arch)	3265	144	✓	✓	✓	✓	✓
Building Construction Management	BBCM	3331	204	✓		✓	✓	✓
Industrial Design	BIndDes	3385	192	✓		✓	✓	✓
Interior Architecture	BIA	3255	192	✓		✓	✓	✓
Landscape Architecture	BLArch	3380	216	✓		✓	✓	✓
Planning	BPlan	3360	240	✓		✓	✓	✓

FACULTY OF THE COLLEGE OF FINE ARTS

Art Education	BArtEd	4801	192	✓		✓	✓	✓
Art Theory	BArtTh	4803	144	✓	✓	✓	✓	✓
Art Theory / Arts	BArtTh BA	4806	192	✓	✓	✓	✓	✓

Program	Award	Program Code	Total UOC	2006 Entry	Hons +	Fee Category		
						CS	L	I

FACULTY OF THE COLLEGE OF FINE ARTS (continued)

Art Theory / Social Science	BArtTh BSocSc	4807	192	✓	✓	✓	✓	✓
Design	BDes	4802	192	✓		✓	✓	✓
Design / Art Education	BDes BArtEd	4808	240	✓		✓	✓	✓
Digital Media	BDM	4810	144	✓	✓	✓	✓	✓
Fine Arts	BFA	4800	144	✓	✓	✓	✓	✓
Fine Arts / Arts	BFA BA	4812	192	✓	✓	✓	✓	✓

FACULTY OF COMMERCE AND ECONOMICS

Business Information Technology	BSc	3971	192	✓		✓		
Commerce	BCom	3502	144	✓	✓	✓	✓	✓
Commerce / Arts	BCom BA	3525	240	✓	✓	✓	✓	✓
Commerce / Science	BCom BSc	3529	192	✓	✓	✓	✓	✓
Commerce / Social Science	BCom BSocSc	3527	240	✓	✓	✓	✓	✓
Economics	BEc	3543	144	✓	✓	✓	✓	✓
Economics / Arts	BEc BA	3526	240	✓	✓	✓	✓	✓
Economics / Social Science	BEc BSocSc	3528	240	✓	✓	✓	✓	✓
Information Systems	BSc	3979	144	✓	✓	✓	✓	✓
Marketing, Tourism and Hospitality Management	BCom	3571	192	✓	✓	✓	✓	✓

FACULTY OF ENGINEERING

Bioinformatics	BE	3647	192	✓		✓	✓	✓
Bioinformatics / Arts	BE BA	3756	240	✓		✓	✓	✓
Bioinformatics / Science	BE BSc	3755	240	✓		✓	✓	✓
Bioinformatics / Biomedical Engineering	BE MBiomedE	3757	240	✓		✓	✓	✓
Chemical Engineering	BE	3040	192	✓		✓	✓	✓
Chemical Engineering (part-time)	BSc(Tech)	3050	144	✓		✓	✓	
Chemical Engineering / Arts	BE BA	3043	240	✓		✓	✓	✓
Chemical Engineering / Biomedical Engineering	BE MBiomedE	3048	240	✓		✓	✓	✓
Chemical Engineering / Science	BE BSc	3042	240	✓		✓	✓	✓
Civil Engineering	BE	3620	192	✓		✓	✓	✓
Civil Engineering / Arts	BE BA	3621	240	✓		✓	✓	✓
Civil Engineering / Science	BE BSc	3730	240	✓		✓	✓	✓
Civil Engineering / Environmental Engineering	BE BE	3631	240	✓		✓	✓	✓
Civil Engineering / Mining Engineering	BE BE	3146	240	✓		✓	✓	✓
Computer Engineering	BE	3645	192	✓		✓	✓	✓
Computer Engineering / Arts	BE BA	3722	240	✓		✓	✓	✓
Computer Engineering / Science	BE BSc	3726	240	✓		✓	✓	✓
Computer Engineering / Biomedical Engineering	BE MBiomedE	3728	240	✓		✓	✓	✓
Computer Science	BSc	3978	144	✓	✓	✓	✓	✓
Computer Science / Arts	BSc BA	3968	192	✓	✓	✓	✓	✓
Computer Science / Digital Media	BSc BDM	3982	192	✓	✓	✓	✓	✓
Science / Computer Science	BSc BSc	3983	192	✓	✓	✓	✓	✓
Electrical Engineering	BE	3640	192	✓		✓	✓	✓
Electrical Engineering / Arts	BE BA	3720	240	✓		✓	✓	✓
Electrical Engineering / Science	BE BSc	3725	240	✓		✓	✓	✓
Electrical Engineering / Biomedical Engineering	BE MBiomedE	3727	240	✓		✓	✓	✓
Engineering / Commerce	BE BCom	3715	264	✓		✓	✓	✓
Environmental Engineering	BE	3625	192	✓		✓	✓	✓
Environmental Engineering / Arts	BE BA	3626	240	✓		✓	✓	✓
Environmental Engineering / Science	BE BSc	3735	240	✓		✓	✓	✓
Food Science (Honours)	BSc(Hons)	3065	48	✓		✓		✓
Food Science and Technology	BSc	3060	192	✓		✓	✓	✓
Food Science and Technology (part-time)	BSc(Tech)	3070	144	✓		✓	✓	
Industrial Chemistry	BE	3100	192	✓		✓	✓	✓

Program	Award	Program Code	Total UOC	2006 Entry	Hons +	Fee Category		
						CS	L	I

FACULTY OF ENGINEERING (continued)

Industrial Chemistry (part-time)	BSc(Tech)	3110	144	✓		✓	✓	
Industrial Chemistry / Arts	BE BA	3103	240	✓		✓	✓	✓
Industrial Chemistry / Science	BE BSc	3102	240	✓		✓	✓	✓
Mechanical and Manufacturing Engineering	BE	3710	192	✓		✓	✓	✓
Mechanical and Manufacturing Engineering / Arts	BE BA	3712	240	✓		✓	✓	✓
Mechanical and Manufacturing Engineering / Science	BE BSc	3711	240	✓		✓	✓	✓
Mechanical Engineering / Biomedical Engineering	BE MBiomedE	3683	240	✓		✓	✓	✓
Mechatronic Engineering / Biomedical Engineering	BE MBiomedE	3688	240	✓		✓	✓	✓
Mining Engineering	BE	3140	192	✓		✓	✓	✓
Mining Engineering / Arts	BE BA	3144	240	✓		✓	✓	✓
Mining Engineering / Science	BE BSc	3142	240	✓		✓	✓	✓
Petroleum Engineering	BE	3045	192	✓		✓	✓	✓
Petroleum Engineering / Science	BE BSc	3047	240	✓		✓	✓	✓
Photonic Engineering	BE	3644	192	✓		✓	✓	✓
Photonic Engineering / Science	BE BSc	3634	240	✓		✓	✓	✓
Photovoltaics and Solar Energy	BE	3642	192	✓		✓	✓	✓
Photovoltaics and Solar Energy / Arts	BE BA	3656	240	✓		✓	✓	✓
Photovoltaics and Solar Energy / Science	BE BSc	3655	240	✓		✓	✓	✓
Renewable Energy	BE	3657	192	✓		✓	✓	✓
Renewable Energy / Science	BE BSc	3658	240	✓		✓	✓	✓
Software Engineering	BE	3648	192	✓		✓	✓	✓
Software Engineering / Arts	BE BA	3652	240	✓		✓	✓	✓
Software Engineering / Science	BE BSc	3651	240	✓		✓	✓	✓
Software Engineering / Biomedical Engineering	BE MBiomedE	3749	240	✓		✓	✓	✓
Software Engineering / Commerce	BE BCom	3653	240	✓		✓	✓	✓
Surveying and Spatial Information Systems	BE	3741	192	✓		✓	✓	✓
Surveying and Spatial Information Systems / Arts	BE BA	3747	240	✓		✓	✓	✓
Surveying and Spatial Information Systems / Science	BE BSc	3746	240	✓		✓	✓	✓
Telecommunications	BE	3643	192	✓		✓	✓	✓
Telecommunications / Arts	BE BA	3646	240	✓		✓	✓	✓
Telecommunications / Science	BE BSc	3641	240	✓		✓	✓	✓
Telecommunications / Biomedical Engineering	BE MBiomedE	3723	240	✓		✓	✓	✓

FACULTY OF LAW

Accounting / Law	BCom LLB	4732	240					
Architecture / Law	BArch LLB	4705	336	✓		✓	✓	✓
Arts / Law	BA LLB	4760	240	✓		✓	✓	✓
Arts (Asian Studies) / Law	BA(Asian Studies) LLB	4762	240					
Arts (Media and Communications) / Law	BA(Media) LLB	4764	240	✓		✓	✓	✓
Art Theory / Law	BArtTh LLB	4703	240	✓		✓	✓	✓
Civil Engineering / Law	BE LLB	4775	288	✓		✓	✓	✓
Commerce / Law	BCom LLB	4733	240	✓		✓	✓	✓
Economics / Law	BEc LLB	4745	240					
Economics / Law	BEc LLB	4744	240	✓		✓	✓	✓
Environmental Engineering / Law	BE LLB	4777	288	✓		✓	✓	✓
Finance / Law	BCom LLB	4735	240					
Information Systems / Law	BCom LLB	4736	240					
International Business / Law	BCom LLB	4738	240					
International Studies / Law	BInSt LLB	4766	288					
		4769						
International Studies / Law	BInSt LLB	4765	288	✓		✓	✓	✓
Jurisprudence / Law	BJuris LLB	4780	240	✓		✓	✓	✓

Program	Award	Program Code	Total UOC	2006 Entry	Hons +	Fee Category		
						CS	L	I

FACULTY OF LAW (continued)

Law (graduate entry)	LLB	4790	144	✓		✓	✓	✓
Law (part-time)	LLB	4791	144	✓		✓	✓	
Marketing / Law	BCom LLB	4710	240					
Planning / Law	BPlan LLB	4707	336	✓		✓	✓	✓
Science / Law	BSc LLB	4770	240	✓		✓	✓	✓
Social Science / Law	BSocSc LLB	4761	240	✓		✓	✓	✓
Social Work / Law	BSW LLB	4785	288	✓		✓	✓	✓
Taxation	BTax	4620	144	✓		✓	✓	✓

FACULTY OF MEDICINE

Arts / Medicine	BA BSc(Med) MB BS	3840	336					
Arts / Medicine	BA MB BS	3841	336	✓		✓		
Science / Medicine	BSc MB BS	3821	336					
Science (Medicine) (exit program only)	BSc(Med)	3811	168	✓		✓		✓
Health and Exercise Science	BSc	3870	192	✓		✓		✓
Health and Sports Science	BSc	3850	192					
Medicine	BSc(Med) MB BS	3801	288					
Medicine	MB BS	3802	288	✓		✓		✓
Medicine	BSc(Med) Hons	3831	48	✓		✓		✓

FACULTY OF SCIENCE

Advanced Science	BSc	3985, 3990	192					
Advanced Science	BSc	3972	192	✓		✓		✓
Advanced Science / Arts	BSc BA	3931	240	✓	✓	✓		✓
Advanced Science / Social Science	BSc BSocSc	3936	240	✓	✓	✓		✓
Applied Geography	BSc	3010	192					
Applied Geology	BSc	3000	192					
Aviation – Flying	BAv	3980	144	✓	✓	✓	✓	✓
Aviation – Management	BAv	3981	144	✓	✓	✓	✓	✓
Biotechnology	BSc	3052	192	✓		✓	✓	✓
Ceramic Engineering	BE	3025	192					
Ceramics (part-time)	BSc(Tech)	3030	144	✓		✓	✓	
Communication	BSc(Comm)	3993	144	✓	✓	✓	✓	✓
Environmental Science	BEnvSc	3988	192	✓		✓	✓	✓
Environmental Science / Arts	BEnvSc BA	3932	240	✓		✓	✓	✓
Innovation Management	DiplInnovMan	3451	36	✓		✓		✓
Materials Engineering	BMatE	3615	192					
Materials Science and Engineering	BE	3135	192	✓		✓	✓	✓
Materials Science and Engineering / Biomedical Engineering	BE MBIomedE	3138	240	✓		✓	✓	✓
Media and Communications	BSc(Media)	3994	144	✓	✓	✓	✓	✓
Medical Science	BMedSc	3991	144	✓	✓	✓	✓	✓
Metallurgical Engineering	BMetE	3125	192					
Metallurgy (part-time)	BSc(Tech)	3130	144	✓		✓	✓	
Nanotechnology	BSc	3617	192	✓		✓	✓	✓
Optometry	BOptom	3950	192			✓	✓	✓
Optometry / Science	BOptom BSc	3952	240	✓		✓	✓	✓
Psychology	BPsychol	3432	192	✓		✓	✓	✓
Science and Mathematics	BSc	3970	144	✓	✓	✓	✓	✓
Science / Arts	BSc BA	3930	192	✓	✓	✓	✓	✓
Science / Education	BScBEd	4075	192	✓		✓	✓	✓
Science / Optometry	BSc Optom	3951	240					
Science / Social Science	BSc BSocSc	3935	192	✓	✓	✓	✓	✓

Program	Award	Program Code	Total UOC	2006 Entry	Hons +	Fee Category		
						CS	L	I

UNIVERSITY COLLEGE, AUSTRALIAN DEFENCE FORCE ACADEMY

Aeronautical Engineering	BE	4424, 4425	192	✓				
Aeronautical Engineering / Arts	BE BA	4445	240	✓				
Aeronautical Engineering / Science	BE BSc	4435	240	✓				
Aeronautical Engineering	BTech	4430	144	✓				
Arts	BA	4400	144	✓	✓			
Aviation	BTech	4437	144	✓				
Business	BBus	4405	144	✓	✓			
Civil Engineering	BE	4421	192	✓				
Civil Engineering / Arts	BE BA	4441	240	✓				
Civil Engineering / Science	BE BSc	4431	240	✓				
Electrical Engineering	BE	4422	192	✓				
Electrical Engineering / Arts	BE BA	4442	240	✓				
Electrical Engineering / Science	BE BSc	4432	240	✓				
Mechanical Engineering	BE	4423	192	✓				
Mechanical Engineering / Arts	BE BA	4443	240	✓				
Mechanical Engineering / Science	BE BSc	4433	240	✓				
Science	BSc	4410	144	✓	✓			
Science / Arts	BSc BA	4450	240	✓	✓			

2006 Tuition Fee Schedule

Identification of Courses and Course Fees 2006

A course is defined by the Academic Board as 'a unit of instruction approved by the University as being a discrete part of the requirements for a program offered by the University'.

Each approved course of the University is identified by a sequence of eight characters, consisting of a four character alphabetical prefix which identifies the subject area, and a four digit numeric suffix which identifies the course. Each course has a unit of credit value defined.

Course identifiers are approved by the Registrar and the system of allocation is based on the following guidelines:

1. A four character alphabetical prefix is used to indicate the subject areas. This usually correlates with the authority offering the course (normally a School of the University), but in some cases identifies subject specialisations or cross-disciplinary subject areas.
2. Each course identifier is unique and is not used for more than one course title.

Courses taught are listed in full in the Undergraduate and Postgraduate Handbooks and in the Online Handbook. The subject areas and organisational units for each identifying alphabetical prefix are also described in the Handbooks and the specialisation pages in the Online Handbook.

Course Prefixes and Associated Fees Per Unit of Credit

A standard session academic load is 24 units of credit (48 UOC per annum).

Fees for courses are charged by unit of credit according to the classification of the course (that is undergraduate, postgraduate, research) and then the classification of the student.

To calculate the charge for a course - refer to the course prefix, appropriate course classification and student classification to determine the fee per unit of credit.

Non-award courses will also be charged according to the classification of the course as above.

For Example: An International student is enrolling in a Faculty of Commerce and Economics course, ACCT3563, which has a value of 6 units of credit and the course is classified as undergraduate.

The fee for this course will be $6 \times \$400 = \$2400.00$

The fees listed are applicable to students who commenced study from Summer Session 2003 onwards.

2006 Tuition Fee Schedule					
Course Details Faculty and Course Prefixes			Course Classification		
			Undergraduate		Postgraduate
			Student Classification		
			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Organisational Unit	Course ID Range (where applicable)	Fee Band per unit of credit			
Faculty of Arts & Social Sciences					
ARTS	Faculty of Arts and Social Sciences		350	350	281
ASIA	Faculty of Arts and Social Sciences		350	350	281
AUST	Faculty of Arts and Social Sciences		350	350	281
CHIN	Department of Chinese and Indonesian Studies		350	350	281
COMD	Faculty of Arts and Social Sciences		350	350	281
CRIM	School of Social Science and Policy		350	350	281
DANC	School of Media, Film and Theatre		350	350	281
EDST	School of Education		350	350	281
ENGL	School of English		350	350	281
EURO	Faculty of Arts and Social Sciences		350	350	281
FREN	Department of French		350	350	281
GENT	Faculty of Arts and Social Sciences		350	na	na
GERS	School of Modern Language Studies		350	350	281
GLST	Faculty of Arts and Social Sciences		350	350	281
GREK	School of Modern Language Studies		350	350	281
HIST	School of History		350	350	281
HPSC	School of History and Philosophy of Science		350	350	281
INDO	Department of Chinese and Indonesian Studies		350	350	281
INST	Faculty of Arts and Social Sciences		350	350	281
INTD	Faculty of Arts and Social Sciences		350	350	281
IRSH	Faculty of Arts and Social Sciences		350	350	281
ITAL	Faculty of Arts and Social Sciences		350	350	281

Course Details Faculty and Course Prefixes	Organisational Unit	Course ID Range (where applicable)	Local and International	Postgraduate	Postgraduate
			Undergraduate Fee	International Fee	Local Fee
			Fee Band per unit of credit		
JAPN	Department of Japanese and Korean Studies		350	350	281
JWST	School of Politics and International Relations		350	350	281
KORE	Department of Japanese and Korean Studies		350	350	281
LATN	School of Modern Language Studies		350	350	281
LING	Department of Linguistics		350	350	281
MDCM	School of Media, Film and Theatre		350	350	281
MEFT	School of Media, Film and Theatre		350	na	281
MODL	School of Modern Language Studies		350	350	281
MUSC	School of Music and Music Education		350	350	281
MUSI	School of Music and Music Education		350	350	281
PECO	School of Social Science and Policy		350	350	281
PHIL	School of Philosophy		350	350	281
POLS	School of Politics and International Relations		350	350	281
PORT	School of Modern Language Studies		350	350	281
RUSS	School of Modern Language Studies		350	350	281
SLSP	School of Social Science and Policy		350	350	281
SOCA	School of Sociology & Anthropology		350	350	281
SOCF	School of Social Work		na	na	337
SOCW	School of Social Work		350	350	281
SPAN	Department of Spanish and Latin American Studies		350	350	281
WOMS	Faculty of Arts and Social Sciences		350	350	281
Australian Graduate School of Management					
MNGT	Australian Graduate School of Management		Refer to Australian Graduate School of Management for Tuition Fee Schedule		
Faculty of the Built Environment					
ARCH	School of the Built Environment (Architecture)		400	400	311
BENV	School of the Built Environment		400	400	311
BLDG	School of the Built Environment (Building)		400	400	311
CONS	School of the Built Environment (Building Construction Management)		400	400	311
GENR	The Faculty of Built Environment		350	na	na
GEOH	School of the Built Environment		400	400	311
GSBE	School of the Built Environment		400	400	311
HERI	School of the Built Environment		400	400	311
IDES	School of the Built Environment (Industrial Design)		400	400	311
INTA	School of the Built Environment (Interior Architecture)		400	400	311
LAND	School of the Built Environment (Landscape Architecture)		400	400	311
PLAN	School of the Built Environment (Planning and Urban Development)		400	400	311

Course Details		Local and International	Postgraduate	Postgraduate
Faculty and Course Prefixes	Organisational Unit	Undergraduate Fee	International Fee	Local Fee
	Course ID Range (where applicable)	Fee Band per unit of credit		
REST	School of the Built Environment (Building Construction Management)	400	400	311
SUSD	School of the Built Environment (Sustainable Development)	400	400	311
UDES	School of the Built Environment	400	400	311
Faculty of the College of Fine Arts				
COFA	College of Fine Arts	400	400	311
GEND	College of Fine Arts	350	na	na
SAED	School of Art Education	400	400	311
SAHT	School of Art History and Theory	400	400	311
SART	School of Art	400	400	311
SDES	School of Design Studies	400	400	311
SOMA	School of Design Studies	400	400	311
Faculty of Commerce & Economics				
ACCT	School of Accounting	400	455	337
ACTL	School of Economics (Actuarial Studies)	400	455	337
COMM	Faculty of Commerce and Economics	400	455	337
ECOH	School of Economics	400	455	337
ECON	School of Economics	400	455	337
FINS	School of Banking and Finance	400	455	337
GBAT	Business and Technology Programs	na	455	337
GENC	Faculty of Commerce and Economics	350	na	na
HOSP	School of Marketing	400	455	337
IBUS	School of International Business	400	455	337
IMGT	School of Information Systems, Technology and Management	400	455	337
INFS	School of Information Systems, Technology and Management	400	455	337
IROB	School of Industrial Relations and Organisational Behaviour	400	455	337
LEGT	School of Business Law and Taxation	400	455	337
LIBS	School of Information Systems, Technology and Management	400	455	337
MARK	School of Marketing	400	455	337
MFIN	School of Banking and Finance	na	455	337
MGMT	Faculty of Commerce and Economics	400	455	337
SERV	School of Marketing	400	455	337
TAHM	School of Marketing	400	455	337
Faculty of Engineering				
AERO	School of Mechanical and Manufacturing Engineering	455	455	337
AVEN	School of Mechanical and Manufacturing Engineering	455	455	337
BINF	School of Computer Science and Engineering	455	455	337
BIOM	Graduate School of Biomedical Engineering	455	455	337
CEIC	School of Chemical Engineering and Industrial Chemistry	455	455	337

Course Details Faculty and Course Prefixes	Organisational Unit	Course ID Range (where applicable)	Local and International	Postgraduate	Postgraduate
			Undergraduate Fee	International Fee	Local Fee
			Fee Band per unit of credit		
CHEN	School of Chemical Engineering and Industrial Chemistry		455	455	337
COMP	School of Computer Science and Engineering		455	455	337
CVEN	School of Civil and Environmental Engineering		455	455	337
ELEC	School of Electrical Engineering and Telecommunications		455	455	337
FUEL	School of Chemical Engineering and Industrial Chemistry		455	455	337
FOOD	School of Chemistry		455	455	337
GENE	Faculty of Engineering		350	na	na
GMAT	School of Surveying and Spatial Information Systems		455	455	337
GSOE	Graduate School of Engineering		455	455	337
INDC	School of Chemical Engineering and Industrial Chemistry		455	455	337
MANF	School of Mechanical and Manufacturing Engineering		455	455	337
MECH	School of Mechanical and Manufacturing Engineering		455	455	337
MINE	School of Mining Engineering		455	455	337
MINP	School of Chemical Engineering and Industrial Chemistry		455	455	337
MNNG	School of Mining Engineering		na	na	403
MTRN	School of Mechanical and Manufacturing Engineering		455	455	337
NAVL	School of Mechanical and Manufacturing Engineering		455	455	337
PHTN	School of Electrical Eng and Telecommunications		455	455	337
POLY	School of Chemical Engineering and Industrial Chemistry		455	455	337
PTRL	School of Petroleum Engineering		455	455	337
SENG	School of Computer Science & Engineering		455	455	337
SOLA	Centre for Photovoltaic Engineering		455	455	337
TELE	School of Electrical Engineering and Telecommunications		455	455	337
Faculty of Law					
ATAX	Faculty of Law (Taxation)		400	400	311
GENL	Faculty of Law		350	na	na
GENQ	Faculty of Law (Taxation)		350	na	na
LAWS	School of Law		400	400	311
LAWX	School of Law		400	400	311
Faculty of Medicine					
ANAT	School of Medical Sciences		455	455	337
ANAM	School of Medical Sciences		750	na	na
CMED	School of Public Health & Community Medicine		750	na	na
CMED	School of Public Health & Community Medicine	9539 to 9550	na	400	311
GENM	Faculty of Medicine		350	na	na
HESC	School of Medical Sciences		455	na	na

Course Details		Local and International	Postgraduate	Postgraduate	
Faculty and Course Prefixes	Organisational Unit	Undergraduate Fee	International Fee	Local Fee	
		Course ID Range (where applicable)	Fee Band per unit of credit		
MDCN	School of Medicine		750	na	na
MDSG	Faculty of Medicine		750	na	na
MEDM	School of Medicine		455	na	na
MFAC	Faculty of Medicine		750	na	na
OBST	School of Women's and Children's Health		750	na	na
PAED	School of Women's and Children's Health		750	na	337
PATH	School of Medical Sciences		455	na	na
PATM	School of Medical Sciences		750	na	na
PHCM	School of Public Health & Community Medicine		750	400	281
PHCM	School of Public Health & Community Medicine	0006 0007 9001 9002 9200 9201 9300 9301 9506	na	na	na
PHCM	School of Public Health & Community Medicine	9003 9004 9801	na	na	na
PHPH	School of Medical Sciences		455	na	na
PHPH	School of Medical Sciences	5401 5411 5420 5421 5431 5440 5441 5450 5451 5453 5470 5510 5530 5571 5581 5591 5611 5621 5631 5711	na	350	337
PHPH	School of Medical Sciences	5461 5471 5481 5491 5501 5511 5521 5531 8006 9100 to 9119 9122 9123 9171 9172 9120 9121 9999	na	455	337
PHPM	School of Medical Sciences		750	na	na
PROR	School of Medical Sciences		455	na	na
PSCY	School of Psychiatry		455	na	na
PSYM	School of Psychiatry		750	na	na
SURG	School of Surgery		750	na	na
Faculty of Science					
AVIA	Department of Aviation		455	455	311
BEES	School of Biological, Earth and Environmental Sciences		455	455	311
BIOC	School of Biotechnology and Biomolecular Science		455	455	311
BIOD	School of Biotechnology and Biomolecular Science		455	455	311
BIOS	School of Biological, Earth and Environmental Sciences		455	455	311
BSSM	Faculty of Science		455	455	311
BIOT	School of Biotechnology and Biomolecular Science		455	455	311
CHEM	School of Chemistry		455	455	311
ENVS	Faculty of Science		455	455	311
FMAT	School of Mathematics		na	455	337
GENS	Faculty of Science		350	na	na
GENB	Faculty of Science		350	na	na
GEOG	School of Biological, Earth and Environmental Sciences		455	455	311
GEOH	School of Biological, Earth and Environmental Sciences		400	400	311

Course Details Faculty and Course Prefixes	Organisational Unit	Course ID Range (where applicable)	Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
			Fee Band per unit of credit		
GEOL	School of Biological, Earth and Environmental Sciences		455	455	311
GEOS	School of Biological, Earth and Environmental Sciences		455	455	311
INOV	Faculty of Science		455	455	311
LIFE	Faculty of Science		455	455	311
MATH	School of Mathematics		455	455	311
MATS	School of Materials Science and Engineering		455	455	311
MICM	School of Biotechnology and Biomolecular Science		455	455	311
MICR	School of Biotechnology and Biomolecular Science		455	455	311
MSCI	Centre for Marine and Coastal Studies		455	455	311
NANO	School of Materials Science and Engineering		455	455	311
OCEA	School of Mathematics (Oceanography)		455	455	311
OPTM	School of Optometry and Vision Science		455	455	311
PHYS	School of Physics		455	455	311
PSYC	School of Psychology		455	455	311
SAFE	School of Safety Science		455	455	311
SCIF	Faculty of Science		455	455	311
SCOM	Faculty of Science		455	455	311
SESC	School of Safety Science		455	455	311
VISN	School of Optometry and Vision Science		455	455	na
University College - Australian Defence Force Academy					
ACHM	Chemistry		na	400	311
ACIV	Civil Engineering		na	400	311
ACSC	Computer Science		na	400	311
AECM	Economics & Mgt		na	400	311
AELE	Electrical Engineering		na	400	311
AENG	English		na	400	311
AGOC	Geography & Oceanography		na	400	311
AHIS	History		na	400	311
AIND	Indonesian		na	400	311
AINT	University College (Interdisciplinary)		na	400	311
AMAT	Mathematics		na	400	311
AMEC	Mechanical Engineering		na	400	311
APHY	Physics		na	400	311
APOL	Politics		na	400	311
ZBUS	School of Business		na	400	311
ZPEM	School of Physical, Environmental & Mathematical Sciences		na	400	311
ZITE	School of Information Technology & Electrical Engineering		na	400	311
ZACM	School of Aerospace, Civil & Mechanical Engineering		na	400	311
ZHSS	School of Humanities & Social Sciences		na	400	311

Course Details			Local and International Undergraduate Fee	Postgraduate International Fee	Postgraduate Local Fee
Faculty and Course Prefixes	Organisational Unit	Course ID Range (where applicable)	Fee Band per unit of credit		
ZINT	University College (Interdisciplinary)		na	400	311
ZIND	School of Humanities & Social Sciences		na	400	311
Non Faculty Specific					
ATSI	Nura Gili (Indigenous Programs)		350	350	281
GENX	Nura Gili (Indigenous Programs)		350	na	na
IEST	Institute of Environmental Studies		400	455	311

UNSW Student Central (Student Enquiries)

UNSW Student Central (Student Enquiries) is the public face of the University's student administration. It provides advice and assistance in relation to admission procedures and queries of an academic or administrative nature.

UNSW Student Central is located on the lower ground floor of the Chancellery, open 8.30am – 5.30pm Mondays, Tuesdays, and Thursdays, 10.00am – 5.00pm on Wednesdays, and 8.30am – 5.00pm on Fridays.

Information regarding fees, online enrolment, policies and procedures is also available on the web at: <https://my.unsw.edu.au>

Admission Requirements and Procedures

Admission Enquiries

The Student Recruitment Office (Kensington Campus) is the initial referral point for **local students** for information on undergraduate programs, and admission requirements. The office is located in Rm LG20, The Chancellery Building and is open from 9am-5pm, Monday to Friday. Tel: (+61 2) 9385 1844/1866/2413 email: studentrecruitment@unsw.edu.au

Program and course information for prospective students can be found at www.unsw.edu.au/futureStudents

UNSW International is the initial referral point for **international students** for information on undergraduate and postgraduate programs. The office is located on the Ground Floor, East Wing of the Red Centre Building. Tel: (+61 2) 9385 6996, email: internationaloffice@unsw.edu.au

Program information for prospective international students can also found at www.international.unsw.edu.au

College of Fine Arts: The Student Centre is located on the ground floor of B Block. It is open from 8.30am to 5.30pm Monday-Friday.

UNSW@ADFA - University College, Australian Defence Force Academy: The Student Centre is located on the top floor in the Administration Building. It is open from 8.30am to 5pm Monday – Thursday and 8.30am – 4pm Friday. Tel: (+61 2) 6268 6000.

Admission Procedures

The procedures for applying to UNSW will vary, depending on whether you are a local or international applicant:

- **Local** applicants are Australian citizens, Australian permanent residents or New Zealand citizens.
- **International** applicants are citizens of a country other than Australia or New Zealand and are not Australian permanent residents.

Local Applicants

All local applicants must apply through the Universities Admissions Centre (UAC). Students who are enrolled in Year 12 in NSW/ACT in 2006 will be issued with a copy of the UAC Guide by their school or TAFE. Other local applicants can purchase the Guide from newsagents in August or apply online at www.uac.edu.au.

The UAC Guide outlines admission/application requirements and procedures for all UNSW undergraduate programs (including ADFA) and includes important information regarding deferment, special consideration for applicants who have experienced long term educational disadvantage (the ACCESS Scheme for students who have not undertaken tertiary study before and SCATS for applicants with a tertiary record) and key dates.

International Applicants

If you are an **international applicant currently completing Year 12 in Australia** you must apply through the Universities Admissions Centre (UAC). You will be issued with a UAC Guide by your school or TAFE and should read Part 3 of the Guide thoroughly.

All other international applicants (i.e. international applicants who have completed or are completing qualifications OTHER than the current Australian Year 12 or are completing an Australian Year 12 outside Australia) must apply for admission directly to UNSW. Before you lodge your application, please refer to UNSW International's website at www.international.unsw.edu.au for further information and entry requirements, or telephone (+61 2) 9385 6996.

Online applications can be lodged at <https://apply.unsw.edu.au>

Entry Requirements

Admission to UNSW is based on academic merit. If you are seeking admission to an undergraduate program you must be able to provide

evidence that you have the potential for tertiary study. Age alone is not a sufficient criterion for admission. Some programs may consider work experience where this is relevant to the application, but this factor alone is not a basis for admission.

Some programs may require additional entry criteria, such as an admissions test, interview and/or audition.

Though there are no specific prerequisite requirements for entry to UNSW undergraduate degrees it will be assumed candidates have studied certain subject areas in their last year of high school or other studies. (See 'Assumed Knowledge' below).

It is also assumed that students are competent at communicating in both written and spoken English. (See 'English Language Requirements').

The following are considered for admission:

Australian and New Zealand High School Qualifications:

- Universities Admission Index (UAI)
- Equivalent National Tertiary Entrance Rank (ENTER) or other interstate Year 12 qualification rank
- Overall Position (OP) and New Zealand National Certificate of Educational Achievement (NCEA level 3)

Other Australian and New Zealand Qualifications:

TAFE Qualifications and qualifications from private colleges - If you hold completed TAFE qualifications including an advanced diploma, diploma, associate diploma or AQF Certificate Level IV or above, you are eligible to be considered for admission. However, due to the high demand for places in most programs, successful applicants generally require a Credit or above average with no failures. Trade certificates are not acceptable for admission purposes.

Currently, UNSW has formal articulation arrangements for students holding a Diploma of Building Studies who wish to study the Bachelor of Building Construction Management (program 3331), and may award approximately 18 months advanced standing, depending upon course selection. Similarly, holders of a 2-year Diploma of Community Services (Welfare) may be granted up to 25% of a 4-year Social Work degree (programs 4031, 4035, 4036).

In the past, students holding other TAFE diplomas have been admitted to degree programs such as Bachelor of Arts, Bachelor of Fine Arts and various Engineering programs. All applicants are considered on a case-by-case basis

Nursing Qualifications - If you are a registered nurse who has completed hospital-based training you are eligible to be considered for admission to some programs. In general, it would be an advantage to have completed at least one post-basic course. Completion of Enrolled Nurse training is not acceptable for admission purposes.

International Qualifications:

Local Students (Australian Citizens, Permanent Residents and New Zealand Citizens) who hold qualifications from overseas should contact Admissions. Tel: (+61 2) 9385 3228, email: ugadmis@unsw.edu.au.

International students should check the following website for entry requirements from their country:

www.international.unsw.edu.au/future/entry

Honours Entry:

Current UNSW students should apply to their Faculty or School Office. Other local students should refer to the following website: www.unsw.edu.au/honours. Other international students should refer to www.international.unsw.edu.au

Alternative Entry

If you do not possess any of the qualifications outlined in 'Entry Requirements', there are a number of alternative avenues through which you may seek admission to an undergraduate program at UNSW.

- **Degree Level Studies** - If you have successfully completed the equivalent of at least two whole-year degree level courses at any recognised Australian tertiary institution on a non-award basis, or four one-unit Open Learning degree level courses, you are eligible to be considered for admission. However, due to the high demand for places in most programs, successful applicants generally hold Credit average results and, in the case of Open Learning at least eight one-unit courses, with credit average results. Please note: If you have attempted any post-secondary studies you will be considered for selection on the basis of your overall record, i.e. both secondary and post-secondary studies. In general, greater weight will be given to your post-secondary record.

- UNSW University Preparation Program (UPP) – local students only
- UNSW Foundation Year
- Limited UAI
- TAFE Certificate in Tertiary Preparation (TPC)
- University of Sydney Preparation Course or Foundation Year from another Group of Eight (Go8) Australian University

The avenue, which is most appropriate for you, will depend on your age, your previous educational qualifications and the program you would like to study.

The follow entry schemes are also in operation:

- AEP Admission Scheme (for Aboriginal and Torres Strait Islander peoples)
- ACCESS scheme (for local high school students who have experienced long-term educational disadvantage)
- Rural Entry Scheme to Medicine
- SCATS (Special Consideration for Applicants with Tertiary Studies) – local UNSW students only
- Early Entry for Exceptionally Talented Students Scheme.

For further information, please contact Admissions (tel: (+61 2) 9385 3228, email: ugadmis@unsw.edu.au) or refer to the following website: www.unsw.edu.au/entryrequirements

Assumed Knowledge

www.unsw.edu.au/assumedknowledge

For some degree programs and first-year courses, it is assumed that through secondary studies or other equivalent studies a student will have achieved a level of knowledge of the subject area that is considered desirable for successful university level study.

Students who do not have the recommended level of assumed knowledge are not prevented from enrolling but they may be placed at a considerable disadvantage. Any students who have not achieved the recommended level of assumed knowledge are strongly advised to undertake a bridging program or other appropriate preparation. (See 'Bridging Programs').

When a student enrolls in a program at UNSW, it is assumed that they are competent at communicating in both written and spoken English. Many courses require students to make oral presentations, prepare assignments or write essays. Without a high level of written and spoken English, it would be difficult to meet the requirements for successful course completion. Fundamentals of English and English as a Second Language are not considered adequate preparation for study at UNSW. (See 'English Language Requirements').

Where Mathematics is listed as assumed knowledge, it is expected that performance at Band 4 has been achieved. General Mathematics does not meet the recommended level of assumed knowledge.

Prerequisite (P) Assumed knowledge (A), Recommended studies (R)

Aviation (Flying)	(P) Flight screening and medical examination and interview (A) Mathematics (R) Physics
Aviation (Management)	(A) Mathematics (R) Physics
Advanced Science	(A) Mathematics and Chemistry, plus one or more of: Biology, Earth and Environmental Science, Physics, HSC Mathematics Extension 1 (depending on chosen area of study) (R) For Science Communications: English Advanced
Art Education	(A) Visual Arts
Biotechnology	(A) Mathematics and Chemistry (R) Biology
Business Information Technology	(A) Mathematics
Commerce & Commerce/Law	(A) Mathematics
Commerce (Marketing, Tourism and Hospitality Management)	(P) Questionnaire and interview (A) Mathematics
Computer Science & Computer Science/Law	(A) HSC Mathematics Extension 1 (R) Software Design and Development or Information Processes and Technology

Design	(A) Visual Arts
Economics & Economics/Law	(A) Mathematics
Education (Dance/Education)	(P) Audition and interview
Education (Music/Education)	(P) Audition and interview (R) Music 2 or AMEB (7th grade Practical and 6th grade theory or Musicianship) or equivalent study.
Education (Science/Education)	(A) Mathematics (prospective science teachers must have Physics or Chemistry) (R) HSC Mathematics Extension 1
Engineering & Engineering/Law	(A) HSC Mathematics Extension 1, plus Physics and/or Chemistry
Environmental Science	(A) Mathematics and Chemistry (R) Earth and Environmental Science or Physics or Biology
Fine Arts	(A) Visual Arts
Health and Sports Science	(A) Mathematics and Chemistry (R) Biology and/or Physics
Industrial Design	(A) Mathematics (R) Physics or Engineering Studies
Information Systems	(A) Mathematics (R) Physics or Chemistry
Medical Science	(A) Mathematics and Chemistry (R) Biology
Medicine	(P) Undergraduate Medicine and Health Sciences Admission Test (UMAT) and interview (A) English Standard (R) Chemistry <i>Note: English as a second language (ESL) and Fundamentals of English are not considered suitable preparation for this program</i>
Music	(P) Audition and interview (R) Music 2, or AMEB (7th Grade Practical and 6th Grade Theory or Musicianship) or equivalent study.
Nanotechnology	(A) HSC Mathematics Extension 1 and Physics and Chemistry
Optometry	(A) Mathematics and Chemistry and English Advanced (R) Physics
Psychology	(A) Mathematics (R) Biology or Chemistry or Earth and Environmental Sciences or Physics
Science & Science/Law	(A) Mathematics and Chemistry, plus one or more of: Biology, Earth and Environmental Science, Physics, HSC Mathematics Extension 1 (depending on chosen area of study)

Assumed Knowledge for Commerce and Economics: Quantitative Methods A (QMA) and Quantitative Methods B (QMB) are compulsory first year courses for students enrolled in Commerce and Economics programs at UNSW. These courses assume students have knowledge of algebra (logarithms, exponentials and graphs), calculus (differentiation and integration) and basic probability concepts. Without a background equivalent to HSC Mathematics, a student would be placed at a considerable disadvantage in QMA and QMB.

Assumed Knowledge for Engineering: All Engineering programs at UNSW assume knowledge of HSC Mathematics Extension 1. Common mathematics courses taken by engineering students in their first year include Mathematics 1A and Mathematics 1B. Students enrolled in these courses whose level of mathematics is below HSC Mathematics Extension 1, will be placed at a considerable disadvantage. In addition to these first year courses, some Engineering programs also require additional study of mathematics in upper level years. Physics is also a compulsory course in many programs. However some programs offer introductory level studies in mathematics and physics to assist those students without a thorough knowledge of both.

Assumed Knowledge for Medicine: The Medicine program at UNSW assumes that students have studied HSC English Standard (or higher), and

have achieved a level of performance of at least Band 4. As is the case in all undergraduate programs at UNSW, Fundamentals of English and English as a Second Language (ESL) are not considered suitable preparation for this program. Medicine students are required to satisfactorily complete a communications course in Year 1 and clinical work from Year 2.

Assumed Knowledge for Science: All Science programs at UNSW assume a level of knowledge equivalent to HSC Mathematics. Some programs require students to continue studying mathematics throughout the program, while others involve the study of mathematics in first year only. In addition, all science degrees recommend studies of at least one HSC science subject and/or HSC Mathematics Extension 1.

Bridging Programs

UNSW bridging courses offer you the opportunity to revise Mathematics, Chemistry and Physics subjects and experience how these subjects are taught at university. Each course has a total of 33-40 hours of lectures, tutorials, laboratory classes and/or demonstration sessions.

All Year 12 (or equivalent) students, older students, and deferring students are eligible. If you intend to study at another university you may still enrol in a UNSW bridging course. However, we advise that you first ensure that the bridging course you select is recognised by that institution.

For further information, please refer to the following website or contact Admissions (tel: 1300 36 8679, email: ugadmis@unsw.edu.au): www.unsw.edu.au/bridging

English Language Requirements

All applicants for admission to UNSW undergraduate or postgraduate programs either in Australia or overseas whose first language is not English, must provide evidence that their English language ability meets the requirements for admission.

The required evidence may take the form of results from an acceptable English Language test undertaken no more than **two years** prior to the commencement of the program at UNSW.

Only ORIGINAL test certificates are acceptable. The University does not accept certified copies of English language results.

Alternatively, applicants whose first language is not English, but who have undertaken at least **one year** of full-time study at a university or other post-secondary educational institution where the sole language of instruction was English, will not be required to undertake a language test, if they can provide a statement or certificate issued by the Registrar's office of that institution confirming this. This study must have been undertaken no more than **two years** prior to the commencement of the program at UNSW.

For further information, please refer to the following website: www.unsw.edu.au/englishproficiency

Non-Award Enrolment

Non-award enrolment refers to all enrolments in courses or a sequence of courses which do not lead to or count towards a formal award (e.g. degree or diploma) of the University of New South Wales.

Non-award enrolments fall into two categories, **voluntary and cross-institutional**.

- A **voluntary** course enrolment is where the student enrolls in a course either out of interest, or to develop professional competence in an area of specialisation. Students enrolled for award programs sometimes simultaneously enrol voluntarily in courses additional to their award requirements. Students should note that they are liable to pay Student Activity Fees each session at the published rate.
- A **cross-institutional** enrolment is where the student enrolls in a course at UNSW for credit towards an award at another Australian tertiary institution in which the student is concurrently enrolled. Before an application for cross-institutional enrolment can be approved, the student must submit both the **home institution's written confirmation that the course applied for will be credited towards award requirements and a certified copy of the student's complete academic transcript**. Undergraduate cross-institutional enrolments will incur Student Contribution liability for the courses taken at UNSW in addition to the liability at the student's home institution. Students enrolled as local fee paying students at their home institution will also be charged tuition fees at UNSW. International students are permitted to enrol on a cross-institutional basis, and are charged tuition fees for their courses.

Rules and Guidelines

The following principles and rules govern the acceptance and enrolment by the University of non-award students, and of students enrolled in award programs in courses, which are additional to their award requirements:

(1) Non-award enrolment in a course, taken either voluntarily or cross institutionally, may be permitted provided that the student has **appropriate educational qualifications** and in each case the Head of School offering the course considers that the student will benefit from the enrolment, that accommodation is available, and that the enrolment does not prevent a place in the course being available to a student proceeding to an award.

(2) The University may limit the number of non-award courses in which a student may enrol, regardless of the permission to enrol that the student may have received from Heads of Schools offering the courses. In general, enrolment will not be permitted in more than four half-year courses in any one academic year.

(3) A student who is under exclusion from any course of the University may not enrol in that course as a voluntary enrolment.

(4) A student who is under exclusion from any program at the University may not enrol in any course which forms a compulsory component of the program from which the student is excluded.

(5) A student who is subsequently admitted to an award program at the University for which the courses completed as a non-award student form a part, may apply for credit for those courses.

(6) As a general rule the University does not permit non-award enrolments in first year undergraduate courses. In addition, the University may decline permission to enrol in a course if the student has not completed prerequisites for that course.

Fees

Tuition fees are charged according to the classification of the course. Please refer to the 'Fee Schedule' in this Handbook.

Application Procedures

Applications to enrol as a non-award student must be made on the Non-Award Enrolment application form available from UNSW Student Central or on the following website: www.unsw.edu.au/futureStudents/nonAward/sad/fsnacrossinst.html

Permission to enrol as a non-award student is conditional on the permission of the Head of School and authorisation from the Director, UNSW Student Services. Applicants should follow the instructions given to them with the application form.

Admission with Advanced Standing and Credit Transfer

Students may be admitted to undergraduate degrees or award with credit for previous study and/or attainments. All credit granted in undergraduate degrees or awards must comply with the following rules:

(1) Any credit granted must be consistent with the rules governing progression within the program which are operative at the time the application is determined.

(2) Students who transfer from another program shall not, in general, be granted standing which is superior to what they had in the program from which they are transferring.

(3) Students who are admitted to the University after completing, or partly completing, the requirements of another degree or award of another tertiary institution must complete a program of study deemed to be no less than that required of students in full-time attendance in the final year of the program concerned.

(4) Where faculty rules permit, students who have been awarded the degree of Bachelor at Pass level may be permitted to enrol for the award of the degree at Honours level with credit for all courses completed if, during their studies for the Pass degree, they have satisfied the prerequisites for entry to the Honours level laid down by the schools concerned or the equivalent of those prerequisites.

(5) Enrolled students have the right of appeal against credit transfer decisions under the Procedures for Resolution of Student Grievances and Disputes.

Applicants should also note that eligibility for credit in a UNSW program does not guarantee admission to that program.

Student Fees

Please note: The information provided in this Handbook relating to Student Activity Fees is subject to change pending the outcome of proposed changes to Commonwealth legislation. For the latest information, please refer to <https://my.unsw.edu.au>

Commonwealth Support

Commonwealth Supported Places (Formerly HECS)

A Commonwealth supported place is a higher education place for which the Commonwealth makes a contribution towards the cost of your

education. If you are enrolled in a unit of study as a Commonwealth supported student, you will generally be required to contribute to the cost of your education through a student contribution.

There are three classes of Commonwealth Supported Students:

- (1) **Post-2005 students** commenced a program of study on or after 1 January 2005. These students pay student contributions at rates approved by UNSW within ranges set by the Commonwealth (indexed annually). (See *Student Contribution Ranges* for information about how rates have been set at UNSW.)
- (2) **Pre-2005 students** commenced a program of study before 1 January 2005. These students pay student contributions at rates set by the Commonwealth (indexed annually). This classification lapses at the end of 2008: from 1 January 2009 students in this category will pay student contributions at the same rates as students commencing after 1 January 2005.
- (3) **Pre-1997 students** commenced a program of study before 1 January 1997. In most respects these students have the same status as pre-2005 students, except that they pay a fixed student contribution set by the Commonwealth (indexed annually).

Student Contributions

Student contributions are paid either up-front or are deferred and paid later through the tax system. The options available for paying your student contribution will depend on your citizenship or residency status.

Student Contribution Ranges

For post-2005 students, higher education providers determine student contribution amounts for each unit of study within ranges set by the Commonwealth. The Commonwealth permits Higher Education Providers to set student contribution rates within a range from \$0 to 125% of the Commonwealth's rate. In June 2004 the UNSW Council approved the University setting its higher education student contribution rates for all courses as follows:

2005: 100% of the indexed indicative Commonwealth rate

2006: 125% of the indexed indicative Commonwealth rate

2007: 125% of the indexed indicative Commonwealth rate

Please refer to the Student Contribution Rate Table for 2006 student contribution rates.

The range that applies to a unit of study is dependent on the student contribution band in which the unit of study is classified. The amount of a student's contribution will also depend on the weight of the unit within the course of study (the equivalent full-time student load [EFTSL] value of the unit).

Student Learning Entitlement

From 1 January 2005 all Commonwealth Supported students will commence using their Student Learning Entitlement (SLE). The SLE gives all Australian citizens, New Zealand citizens and holders of a permanent visa access to seven years of equivalent full-time study in a Commonwealth supported place.

Eligibility for Loans and Discounts

Only Australian citizens and holders of a permanent humanitarian visa are eligible for HECS-HELP assistance. The discount for full up-front payments or up-front payments of \$500 or more is 20%. New Zealand

citizens and holders of non-humanitarian Permanent Resident visas are still entitled to Commonwealth Support, but must pay 100% of their Student Contribution up-front.

If you enrol in a Commonwealth supported place, you **must complete** a 'Request for Commonwealth Support and HECS-HELP' application on or before the relevant census date. There are two types of 'Request for Commonwealth Support and HECS-HELP' application: One is for new students commencing their course of study from 1 January 2005; the other is for pre-2005 HECS students who are continuing with the course of study they began prior to 1 January 2005.

Failure to complete the appropriate Request for Commonwealth Support and HECS-HELP application will result in the cancellation of your enrolment as a Commonwealth supported student.

Before signing the application, students must read the *Information for Commonwealth Supported Students* booklet in order to be aware of their obligations as the recipient of assistance from the Commonwealth.

Provision of your Tax File Number (TFN)

You need to supply your TFN if you are eligible for HECS-HELP assistance and you wish to obtain a HECS-HELP loan for all or part of your student contribution; or you are paying your student contribution up-front but, as a safety net, you want to ensure that if you fail to make the payment on or before the census date, that you can still obtain a HECS-HELP loan.

If you have not paid your student contribution in full on or before the census date and you did not provide your TFN, UNSW will be obligated to cancel your enrolment as a Commonwealth supported student.

Students who Commenced Studies before 2005 (Pre-2005 Students)

If you commenced your program of study as a Higher Education Contribution Scheme (HECS) student before 1 January 2005, you may be considered to be a pre-2005 HECS student. However, you will be affected by most of the provisions outlined in the previous section. That is:

- you will become a Commonwealth supported student;
- commence using SLE; and
- if eligible, access HECS-HELP assistance, including the new discount rate of 20% for up-front payments of \$500 or more.

Pre-2005 HECS students will also be subject to the current thresholds for the repayment of HECS debt and the new bonus for voluntary repayments.

The only changes that affect students differently as a pre-2005 HECS student are:

- changes to the student contribution amounts; and
- new eligibility criteria for HECS-HELP.

The arrangements that apply are described below. From the end of 2008, however, all students will be subject to the new arrangements, regardless of whether they have completed their program.

Student Contribution Amounts 2006

UNSW has set the following Student Contribution amounts for Commonwealth supported students. **In 2006, all 'post-2005 students', including those who commenced a program of study on or after 1 January 2005 will pay student contributions at 125% of the indicative Commonwealth rate** (see *Student Contribution Ranges* above and the Student Contribution Rate Table for further information.)

Student Contribution Rate Table – 2006

Student Contribution Band	Student Contribution – Post-2005 Students (including those commencing in 2005 and 2006)	Student Contribution – Pre-2005 Enrolled Commonwealth Supported HECS Students
Band 1 (humanities, behavioural science, social studies, foreign languages, visual and performing arts)	\$4,899	\$3,920
Band 2 (accounting, administration, economics, commerce, mathematics, statistics, computing, built environment, health, engineering, science, surveying, agriculture)	\$6,979	\$5,583
Band 3 (law, dentistry, medicine, veterinary science)	\$8,170	\$6,535
National Priorities (education, nursing)	\$3,920	\$3,920

For pre-2005 HECS students who began their program **before 1 January 1997**, the Student Contribution for 2006 is \$2,943. The pre-1997 rate is indexed each year.

Calculating Student Contribution Amounts and EFTSL

Equivalent full-time student load (EFTSL) is a measure of the study load, for a year, of a student undertaking a program on a full-time basis. The amount of the student contribution depends on the EFTSL value of the course.

Calculating EFTSL for a course

At UNSW, a normal full-time enrolment for one year is defined as 48 units of credit (24 units per session). A course (unit of study, e.g. MATH1011) has the same unit of credit value and generates the same load (EFTSL) irrespective of the program (e.g. BSc) or the stage in which it is taken. Most courses at UNSW have a value of 6 units of credit (6 UOC).

To calculate the EFTSL of a course, you will need to note its units of credit (UOC) value. The unit of credit value for a course is displayed in this Handbook or in the Online Handbook at www.handbook.unsw.edu.au.

Eligibility for HECS-HELP assistance

HECS-HELP loans are available to eligible students enrolled in Commonwealth supported places. A HECS-HELP loan will cover all or part of the student contribution amount.

Commonwealth supported students who are eligible for HECS-HELP can either:

- pay their student contribution amount up-front and receive a 20% HECS-HELP discount, or
- defer payment, request a HECS-HELP loan and pay later through the tax system.

HECS-HELP assistance is available only to Australian citizens or holders of a permanent humanitarian visa.

HECS-HELP assistance eligibility for New Zealand citizens or holders of a permanent visa (other than a permanent humanitarian visa) who are pre-2005 HECS students will be determined under the old HECS rules until the end of 2008.

FEE-HELP

- FEE-HELP is a new loan program that assists eligible fee-paying students to pay their tuition fees at eligible higher education providers. Australian citizens and holders of a permanent humanitarian visa are eligible for FEE-HELP assistance.
- Under FEE-HELP, students can borrow up to a maximum of \$50,950 (indexed each year) over their lifetime.
- Undergraduate FEE-HELP loans are subject to a 20% loan fee.

OS-HELP

- OS-HELP is a new loan program that assists eligible undergraduate students who wish to study overseas for one or two study periods. It assists these students with payment of their tuition fees at eligible higher education providers. Australian citizens and holders of a permanent humanitarian visa are eligible for OS-HELP assistance.
- Under OS-HELP, students can borrow up to \$5,095 per study period for one or two study periods of overseas study.
- OS-HELP loans are subject to a 20% loan fee.

Commonwealth Assistance Notice

A Commonwealth Assistance Notice (CAN) is a notice that contains information about a student's enrolment and use of Commonwealth assistance. This notice is published to the web and is available via the *My Student Profile* tab on myUNSW within 28 days of the census date for each semester.

If you are a Commonwealth supported student, your CAN will include the following information:

- the units of study for which you have received Commonwealth assistance
- your student contribution amounts
- your Student Learning Entitlement (SLE) usage
- the amount of any up-front payments you have made
- your HECS-HELP assistance.

If you have applied for FEE-HELP, your CAN will include the following information:

- tuition fees for your unit(s)
- units of study for which you have received FEE-HELP
- amount of any up-front payments you have made
- loan fee for undergraduate units of study

You are required to check your CAN notice for any discrepancies within 7 days of the issue of the notice, and you have the right to request correction of information contained in this notice until the date as shown in the last paragraph of the notice.

Payment of Fees

Fees are charged and are payable on a semester basis. Tuition fees and Student Activity Fees are payable each semester in advance. Students must access their statements online. Students will be able to view their fee statement and payment options (Statement of Student Debt) online approximately 2-3 weeks before classes commence. Students should refer to this online statement (available at <https://my.unsw.edu.au>) for payment deadlines and payment options.

Students with An Existing HECS or PELS Debt

HECS or PELS Debts

From 1 June 2006, an accumulated HECS or PELS debt will become known as an accumulated HELP debt. Any HECS-HELP or FEE-HELP debts you incur from 1 January 2005 will be added together with your HECS or PELS debt to become one accumulated HELP debt on 1 June 2006.

Repayment Thresholds

The repayment threshold for compulsory repayment of HELP debts in 2005-06 is \$36,185.

Bonus for Voluntary Repayments

From 1 January 2005, if you make a voluntary repayment of \$500 or more, you will receive a bonus of 10% of the repayment you make.

Bankruptcy Rules

From 1 January 2005, HELP debts and accumulated HELP debts are not provable under the *Bankruptcy Act 1966* and you will have to pay them as if you had not been declared bankrupt. Your HECS or PELS debt will remain provable until it becomes part of your accumulated HELP debt on 1 June 2006. Further information is available from: <https://my.unsw.edu.au> or www.goingtouni.gov.au.

Student Activity Fees

Please note: The information provided in this Handbook relating to Student Activity Fees is subject to change pending the outcome of proposed changes to Commonwealth legislation. For the latest information, please refer to <https://my.unsw.edu.au>

Total Activity Fee charged per semester

(incl. Miscellaneous Student Activity Fee and GST)

Kensington Students

full-time students: \$257.80

part-time students: \$205.00

COFA Students

full-time students: \$176.40

part-time students: \$125.80

1.1 Student Activity Fees have two components: Semester Subscriptions (to the various student organisations (listed in (a) below) and the Miscellaneous Activity Fee (see (b) below).

a) 2006 Semester Subscriptions:

These are charged and payable each standard semester. Due dates are the same as for student contributions and tuition fees. Subscriptions are adjusted annually by a system of indexation. Please note that, as explained below, GST has been included in these fees.

Kensington Campus:

University Union per semester subscription:

full-time students: \$137.50

part-time students: \$103.40

Sports Association per semester subscription:

full-time students: \$44.00

part-time students: \$33.00

Student Guild per semester subscription:

full-time students: \$36.30

part-time students: \$28.60

College of Fine Arts:

College of Fine Arts Students' Association per semester subscription:

full-time students: \$136.40

part-time students: \$85.80

GST (Good and Services Tax)

The Australian Government has determined that a Goods and Services Tax (GST) of 10% applies to most goods and services and anything else consumed in Australia. Certain exceptions include most education courses provided by the University. If you are enrolled in an award program you will not be liable for the GST.

However subscriptions for membership of the Students' Union, Guild and Sports Association are not part of the academic award program and these fees are therefore subject to GST.

b) 2006 Miscellaneous Activity Fee:

This fee is used to finance expenses generally of a capital nature relating to student activities and includes an allocation for insurance cover for students. Funds are allocated for projects approved by the University Council.

Kensington: \$40.00 per session

College of Fine Arts: \$40.00 per session

1.2 Exemption from Student Activity Fees

Students often seek exemption from Student Activity Fees for reasons other than those set out below. It is stressed that the fees charged are a contribution by students towards services and amenities for the University community both now and in the future and exemption from them cannot be claimed because a student is unable or unwilling to make use of some of those services or amenities.

(1) Life members of the University Union and the Sports Association are exempt from Subscriptions.

Students who consider themselves eligible for life membership of the University Union or the Sports Association should make enquiries at the offices of those organisations. Once life membership has been approved, contact the Treasury with your life membership details.

(2) Students enrolled in programs classified as external or who are enrolling in programs where for a semester or semesters the formal academic requirements are undertaken at a part of the University away from their campus such as a teaching hospital or field station or at another tertiary institution or elsewhere, are exempt from all Semester Subscriptions but not the Miscellaneous Activity Fee. Students who consider themselves eligible for a Semester Subscription fee concession on the basis of external study should contact their Program Authority in the first instance.

(3) Students enrolled in programs at the University College, Australian Defence Force Academy, are exempt from the Student Activity Fees, but shall pay such other fees and charges as the Council may from time to time determine.

(4) Students who while enrolled at and attending another tertiary institution in a degree or diploma course are given approval to enrol at the University in courses to be credited towards the degree or diploma for which they are enrolled elsewhere are exempt from all subscription Student Activity Fees. Students should provide proof of payment of such fees at another tertiary institution to the Student Financials Section at UNSW Student Central.

(5) Graduate students who have completed all the experimental and research work for their degree at the commencement of session, except for the submission of their thesis or project report, may be exempted from the payment of all Student Activity Fees by the Registrar on production of an appropriate statement from the student's supervisor or Head of School certifying that the student is no longer using University facilities.

(6) Graduate students required to resubmit their thesis or project report where resubmission requires no further experimental or research work may be exempted from payment of all Student Activity Fees by the Registrar on production of an appropriate statement from the supervisor or Head of School.

(7) The Registrar is empowered to grant exemption from membership of the University Union, Student Guild and/or the Sports Association to students who have a genuine conscientious objection to such membership, subject to payment of all prescribed fees to the Miscellaneous Activity Fee fund.

1.3 Refund of Student Activity Fees Paid

(1) If notice of discontinuation of a program is received on or before 31 March a full refund of Session 1 Subscriptions and the Miscellaneous Activity Fee paid will be made; if notice is given on or before 31 August a refund of Session 2 Subscriptions and the Miscellaneous Activity Fee paid will be made; thereafter no refund will be made except that provided for in (2) below.

(2) The refunds mentioned above may be granted to a student unable to notify the Registrar in writing by the dates required provided evidence is supplied that the student had ceased attendance by those dates. Students who consider themselves eligible for a refund should contact the Treasury.

(3) The refunds mentioned in (1) above also apply to graduate students who submit a thesis or project report for examination or whose enrolment is discontinued by the dates given.

UNSW Fee Policy: Local Students

Australian citizens, New Zealand citizens and Australian permanent residents are categorised as local students. Fee-paying programs include postgraduate, undergraduate and non-award programs. These rules apply only to students enrolled as fee-paying students. They do not apply to Commonwealth supported students (HECS).

Acceptance of an Offer of Admission

There is no tuition fee deposit required, however your reply must be received within 4 weeks of date of offer, or as otherwise advised, to secure your place. Tuition fees for the first semester of the program are payable by the end of the first week of the semester, as indicated on the fees statement available at <https://my.unsw.edu.au>

Fees Payable

Tuition Fees:

Fees are reviewed annually and may increase. See the '2006 Tuition Fee Schedule' in this Handbook for a complete schedule of tuition fees.

Non-Award, Cross-Institutional and Voluntary Course Fees:

Fees are charged for non-award enrolment in a course, and for enrolment in a cross-institutional course. Fees are charged according to the classification of the course (Undergraduate, Postgraduate, Research). See the '2006 Tuition Fee Schedule' in this Handbook for a list of a complete schedule of tuition fees.

Student Activity Fees:

All students enrolling in fee-paying programs, including non-award enrolments, are liable to pay Student Activity Fees each semester at the published rates (please refer to 'Student Activity Fees' under 'Student Fees' for more information). Student Activity Fees are additional to tuition fees and are separately identified on fee statements. Student Activity Fees are subject to annual review and may increase from one year to the next. These fees (with the exception of the Miscellaneous Activity Fee component) are subject to the Australian Government's Goods and Services Tax (GST), which is levied at 10%. Students enrolling in distance education programs are required to pay the Miscellaneous Activity Fee component only.

Calculation of tuition fees:

Tuition fees are calculated on a student's enrolment in specific courses. UNSW students enrolled in most programs have some flexibility in the courses they choose and, at times, these courses will be from outside their own Faculty. Tuition fees are derived from the relative cost of providing each type of course and will be calculated on the basis of that year's current fee. Information on tuition fees is provided in the offer letter. Further information is also available on the following website: <https://my.unsw.edu.au/student/fees/FeesMainPage.html>

Repeated Courses – Students who are required to repeat courses will be charged the full cost to re-enrol in the course, based on the units of credit for that course at the time it is repeated.

Payment of fees:

Fees are charged and payable on a semester basis. Tuition fees and Student Activity Fees are payable by semester in advance. Students must access their statements online. Students will be able to view their fee statement and payment options (Statement of Student Debt) online approximately 2 – 3 weeks before classes commence. Students should refer to this online statement (available at <https://my.unsw.edu.au>) for payment deadlines and payment options.

Please note: Costs associated with payments for deposit requirements, tuition and/or activity fees to the University via electronic or direct funds transfer will be seen as the students' responsibility and the cost shall be borne by the student. Please check with your financial institution before making any transfer of payment.

Non-Payment of Fees:

Failure to pay fees according to the payment guidelines may result in a student's enrolment being cancelled. If, with notice, a student's enrolment is cancelled for non-payment of fees and that student is subsequently permitted to have his/her enrolment reinstated, a \$250.00 reinstatement fee will be levied. A student whose enrolment is cancelled will retain her/his fee liability, so that re-enrolment in a subsequent year, or semester, will not be permitted until such a time as the debt is either paid in full or agreement reached between the student and the Registrar on the method of repayment.

Students indebted to the University will not be issued with academic transcripts or any other official credentials and will not be permitted to graduate.

Refund of Fees Paid

(1) Refund of Deposit

Where a student is required to make an initial deposit to confirm her/his place in a program, the deposit is non-refundable.

(2) Refund of Program Fees – New Students

If a student in her/his commencing semester lodges a notice of discontinuation of a program after enrolment and before the census date for that semester, all tuition fees will be refunded less \$500.00. The student will incur and retain a liability for payment of \$500.00 regardless of whether or not fees have been paid.

(3) Refund of Program Fees Paid – Re-Enrolling Students:

For re-enrolling students, if notice of discontinuation of course is received on or after the census date of a new academic semester, no refund of tuition fees paid for that semester will be made. In such instances, the student will incur and retain a liability for that semester's fees regardless of whether or not fees have been paid.

(4) Refund of Program Fees – Non-Award Enrolment

If notice of discontinuation of a course is lodged on or before the census date for that semester, a full refund of the fee for the course will be made.

A student will incur and retain liability for the course fee, regardless of whether the fee has been paid, if notice of discontinuation is not lodged before the census date for that semester.

In the case of a course(s) conducted outside the normal semester format, such as those conducted in summer or winter semesters, a refund will only be made if notice of discontinuation is lodged before the commencement of the course.

(5) Refund of Program Fees Paid – Special Cases:

A refund may be granted to a student unable to notify the Registrar in writing by the dates required, provided evidence is supplied that the student had ceased attendance by the census date, and was unable to notify the Registrar or reasons beyond her/his control. A refund may be granted in cases where the applicant is unable to commence or continue in the program because of documented illness or misadventure.

A postgraduate student who submits a project report or thesis for examination by the census date for that semester will not be liable for fees in that semester.

Commonwealth Assistance Notice (CAN)

A Commonwealth Assistance Notice (CAN) is a notice that contains information about a student's enrolment and use of Commonwealth assistance. This notice is issued to the web and is available via the *My Student Profile* tab on myUNSW within 28 days of the census date for each semester.

The Commonwealth Assistance Notice (CAN) is issued to Commonwealth Supported and FEE-HELP students only.

Relevant Dates

A complete schedule of semester and census dates is available on the UNSW website: <https://my.unsw.edu.au>

Disclaimer

Students should note that courses, programs and any arrangements for programs, including staff allocated, as stated in any University publication, are an expression of intent only, and are not to be taken as a firm offer of undertaking. Students wishing to take particular elective courses should ensure that these will be available prior to accepting the offer.

UNSW Fee Policy: International Students

This policy applies to all international students. An international student is a student who is not a citizen or permanent resident of Australia, or a New Zealand citizen. All enrolled international students (or their sponsors), whether in attendance at a campus of UNSW or offshore are liable for payment of tuition fees and Student Activity Fees.

Acceptance of an Offer of Admission

Tuition Fee Deposit: International students wishing to accept an offer of admission to a program must pay a deposit fee to secure their place. Places in programs will be allocated in order of receipt of the deposit. The balance of tuition fees for the first session of the program is payable according to the payment guidelines on the fees statement issued after enrolment. External or offshore students and some government-sponsored students have different deposit requirements, as detailed in the offer letter.

Student Visa: On receipt of the deposit and, if appropriate, the health insurance payment, the University will issue an Electronic Confirmation

of Enrolment for Overseas Students (e-COE) form which a student requires in order to apply for a student visa for travel to, and temporary residence in, Australia.

Deferment: Requests to defer initial enrolment from one year to the next, or one session to the next, must be made in writing or online by the deadline stipulated in the offer letter. Not all programs permit deferment. Students not permitted to defer must lodge a new application for admission at the time appropriate for their intended commencement of the program. A student who defers will be liable for the tuition fees applicable in the year in which he/she will enrol.

Fee Charges and Payments

Fees Payable

(1) Tuition Fees:

Fees are reviewed annually and may increase. See the '2006 Tuition Fee Schedule' in this Handbook for a list of a complete schedule of tuition fees.

(2) Student Activity Fees:

All students enrolling in fee-paying programs, including non-award enrolments, are liable to pay Student Activity Fees each session at the published rates (please refer to 'Student Activity Fees' under 'Student Fees' for more information). Student Activity Fees are additional to tuition fees and are separately identified on fee statements. Student Activity Fees are subject to annual review and may increase from one year to the next. These fees (with the exception of the Miscellaneous Activity Fee component) are subject to the Australian Government's Goods and Services Tax (GST), which is levied at 10%. Students enrolling in distance education programs are required to pay the Miscellaneous Activity Fee component only.

(3) Health Insurance:

It is a requirement of the Australian Government that student visa holders are covered by medical insurance (Overseas Student Health Cover, OSHC) for the duration of their study in Australia. Students must ensure that they have made arrangements for their OSHC when accepting their offer of a place. OSHC can initially be paid for a minimum period of 12 months or for the duration of the student's program*. Students who pay for a minimum of 12 months are responsible for renewing their health cover directly with either the University's Preferred Provider for medical insurance for international students or other approved provider, when their initial cover expires. OSHC charges are regularly reviewed and charges quoted on the UNSW offer letter are subject to change.

Students should be aware that the duration of cover might be shorter than anticipated, should an increase in the charge occur after the offer letter has been sent. Students on external/distance education programs and not residing in Australia are not required to pay OSHC. Similarly, students who do not need a student visa to study in Australia are not required to pay OSHC.

** Please note that the University will require students to take out program-length cover from Semester 2 2006 onwards.*

(4) Calculation of Tuition Fees:

Tuition fees are calculated on a student's enrolment in specific courses. UNSW students enrolled in most programs have some flexibility in the courses they choose and, at times, these courses will be from outside their own Faculty. Tuition fees are derived from the relative cost of providing each type of course and will be calculated on the basis of that year's current fee. Information on the tuition fees is provided in the offer letter. However further information can be found on the myUNSW website: <https://my.unsw.edu.au/student/fees/FeesMainPage.html>

(5) Full-Time Program Study Requirement:

Students holding a student visa are required to undertake their studies on a full-time basis. UNSW defines a standard normal full-time enrolment as 24 units of credit (UOC) per session. A minimum load of 18 UOC will satisfy the full time requirement. However, if students enrol in the minimum full-time load, they will need to take additional courses in a future session to complete their program within the time frame specified on their visa. The University expects that students will undertake their studies on a full-time basis and complete the program in the minimum time.

(6) Payment of Tuition Fees & Student Activity Fees:

Fees are calculated and payable on a session basis. Tuition fees and Student Activity Fees are payable per session in advance. Students must access their statements online. Students will be able to view their fee statement and payment options (Statement of Student Debt) online approximately 2 to 3 weeks before classes commence. Students should refer to this online statement (available at <https://my.unsw.edu.au>) for payment deadlines and

payment options. Students who have an agreement with the University that their fees will be paid by a recognised sponsor (i.e. home government/institution) will be able to view a fees statement online indicating if any fees are required (i.e. fees which are not covered by their sponsor). If a student is not liable for any fees, the online statement simply serves as a confirmation of their enrolment. A separate invoice for fees will be sent to the sponsor after the census date of each session. Unless stipulated in the offer letter, all fee payments must be made in Australian dollars, and finalised by the University payment due date for each session.

Please note: Costs associated with payments for deposit requirements, tuition and/or activity fees to the University via electronic or direct funds transfer will be seen as the students' responsibility and the cost shall be borne by the student. Please check with your financial institution before making any transfer of payment.

(7) Non-Payment of Fees:

Failure to pay tuition fees and Student Activity Fees according to the payment guidelines may result in a student's enrolment being cancelled. If, with notice, a student's enrolment is cancelled for non-payment of fees and that student is subsequently permitted to have his/her enrolment reinstated, a \$250.00 reinstatement fee will be levied. A student whose enrolment is cancelled, will retain her/his fee liability, so that re-enrolment in a subsequent year or session will not be permitted until such a time as the debt is either paid in full or agreement reached between the student and the Registrar on the method of repayment. Students indebted to the University will not be issued with academic transcripts or any other official credentials and will not be permitted to graduate.

Fee Variations (including Change of Residency)

Permanent Resident Status:

If a student obtains Australian permanent residency before enrolling in the program, or prior to the census date of the session of first enrolment in that program, the offer of a place (or the enrolment) as an international student will lapse. The student will then be considered for admission as a local student.

The Department of Science, Education and Training (DEST) guidelines clearly state that all students must finalise enrolment issues (including permanent residency status) by the relevant census date. There is no provision to extend the census date deadlines.

Students must provide proof of residency on or before the relevant session census date in order to be assessed for admission as a local student and be eligible for the local tuition rate. Students who receive their residency on or prior to the relevant session census date but fail to provide the University with a certified copy of their evidence until after the census date will remain liable for the international tuition rate for the remainder of the session.

Please note: the University cannot be held accountable for problems which may occur between students and the Department of Immigration and Multicultural Affairs (DIMIA) regarding the issuing of permanent residency visas and is unable to apply retrospective adjustments for prior sessions.

Students who are granted Australian permanent resident status after the census date of their first session of enrolment or after the census date of any subsequent session will be seen as having entered into a contract with the University to pay international fees for that session.

Please note that because of government controls on the number of local students that can be enrolled, students who obtain permanent residency may not qualify for a Commonwealth Supported place (HECS).

Repeated Courses:

Students who are required to repeat courses will be charged the full cost to re-enrol in the course, based on the units of credit for that course at the time it is repeated.

Non-Award Course Enrolment:

In certain cases, students may be permitted by a Faculty to enrol in additional courses that cannot be counted towards award requirements. If permitted to do so, the student will need to apply for and be enrolled in a separate non-award program and charged at the international student rate according to the band fee for the course enrolled in.

Graduate students completing a thesis or project report:

Graduate students who have completed all work (i.e. all research, laboratory, computational and field work) before the commencement of a session, except for the preparation and submission of the thesis or project report, will be exempted from the fees for that session if the thesis or project report is submitted before the census dates. After these dates fees will be charged at the rate of 50% for the session in which the thesis or project report is submitted, provided the student has exceeded

the minimum period of enrolment specified in the degree conditions. Graduate students who are permitted to resubmit a thesis or project report and required to undertake a further period of study are liable for the full cost of the further study period.

Refund of Fees Paid

(1) Withdrawal Prior to Enrolment (Refund of all fees paid less administrative charge of \$500):

Applicants who notify the University in writing before they enrol in the program for the first time that they wish to withdraw, will receive a refund of all tuition fees paid less an administrative charge of \$500. The full amount may be refunded in cases where the applicant has not been granted a student visa or is unable to attend because of documented illness or misadventure. Any refund so made will be at the discretion of the Registrar. A student may receive a full refund if it can be shown that, following discussions with program authorities, it is not possible for that student to enrol in an appropriate program. Refunds of tuition fees will normally be made within four weeks from the date of request or the date of clearance of the original payment, whichever is the later.

(2) Commencing Students - Withdrawal By Census Date (Refund of all fees paid less administrative charge of \$1000):

Students who withdraw from the program prior to the census date in their commencing session will receive a refund of all fees paid less an administrative charge of \$1,000.

(3) Commencing Students - Withdrawal After Census Date (No refund):

Students who withdraw after the census date in their commencing session will not receive a refund for fees paid unless they have also paid fees for a full year, in which case, fees paid for the second session will be refunded in full.

(4) Re-enrolling Students - Withdrawal By Census Date (Refund of all fees paid):

Students who withdraw from the program prior to the census date of that session will receive a refund of all fees paid for the session.

(5) Re-enrolling Students - Withdrawal After Census Date (No Refund):

Students who withdraw from the program after the census date will not receive a refund of fees paid unless they have also paid fees for a full year, in which case, fees paid for the second session will be refunded in full.

(6) Illness and Misadventure:

Students who have to withdraw at any time because of documented ill health or misadventure may apply for a refund of fees paid. However, pro-rata refunds will be considered only in exceptional circumstances. Any refund so made will be at the discretion of the Registrar.

(7) Students Not Permitted to Continue:

Students not permitted to continue in their program because of a determination made by the University in relation to unsatisfactory progress, or any other reason, at the end of Session 1, will receive a refund of any fees paid for Session 2.

(8) Refunds for Tuition Fees Paid:

Refunds will be processed and normally paid within 4 weeks of receiving a written request, and all required documentation from the student. Refunds will only be made in Australian Dollars, following clearance of the original payment, and are usually in the form of a bank draft, mailed to the student. If a telegraphic transfer is required to a bank account, please ensure you include all bank details on the refund request. This method of refund is not recommended because of banking difficulties in some countries.

(9) Difficulties with Payment:

Students who are unable to pay their fees by the agreed dates should apply in writing to the Student Financials Section, Student Administration and Records Office, through UNSW Student Central, Lower Ground Floor of the Chancellery Building. In exceptional circumstances special payment arrangements may be made for students, taking into account their financial and other circumstances. Students should not assume that extensions will be granted automatically and are reminded that non-payment of fees may result in cancellation of enrolment.

(10) OSHC

Students who decide not to enrol with the University will be eligible for a full refund of any OSHC paid. The refund will be issued by the University, if the payment has not been sent to the OSHC Provider. However, students will be responsible for contacting the Provider directly, if the payment has been sent and processed.

Students who enrol with the University, but who decide to withdraw, should be aware that they are required to pay a minimum of 3 months cover, and this will be deducted from any refund.

In requesting a refund, students must provide the Provider with the following information: full name, date of birth, OSHC membership number together with the reason for refund and either evidence of transferring to another university, or the date of departure from Australia.

Relevant Dates

A complete schedule of session and census dates is available on the myUNSW website: <https://my.unsw.edu.au>

Disclaimer

Students should note that courses, programs and any arrangements for programs including staff allocated, as stated in any University publication, are an expression of intent only and are not to be taken as a firm offer or undertaking. Students wishing to take particular elective courses should ensure that these will be available prior to arriving in Australia

This fee policy does not remove the right to take further action under Australia's consumer protection laws (Education Services for Overseas Students Act 2000 Section 43.1).

Other Fees and Charges

Special Examination Fees

Examinations conducted in special circumstances for each course: \$85

Other Charges

In addition to any of the fees outlined above and depending on the course being taken, students may be asked to make a payment for equipment; money so paid is, in general, refunded if the equipment is returned in a satisfactory condition. Charges may also be payable for accommodation and subsistence on excursions and fieldwork; and for hospital residence by medical students.

Penalty Fees

- (1) Failure to lodge enrolment or pay fees* according to enrolment procedure: \$100
- (2) Late enrolment penalty for re-enrolling students: enrolment in Week 1 of Session 1 or later: \$250
- (3) Reinstatement of enrolment fee: \$250
- (4) A penalty fee of \$250 will be incurred by a student when a result is returned for a course which is not included in the student's enrolment program.

Penalties (1) and (2) may accumulate.

** Fees include Student Activity Fees, fees levied for voluntary enrolment, non-award enrolment, international student fees, tuition fees for postgraduate and undergraduate programs, and up-front Student Contribution liability.*

Sponsored or Assisted Students

Sponsored or Assisted students are those who have an official sponsor recognised by the University and whom the University invoices directly, rather than invoicing the individual student.

Students who have an "unofficial sponsor" such as an employer or a family member who have agreed to cover study costs should note that in all cases UNSW considers the student is solely responsible for any financial liability to the University.

Students in receipt of an official sponsor should note that they will be liable for any unpaid tuition and activity fee costs should the sponsor default on payment in any given semester. A student with an outstanding debt may not be permitted to re-enrol in a subsequent year or semester until such time as the debt is paid in full. Students indebted to the University will not be issued with academic transcripts or any other official credentials and will not be permitted to graduate.

Debts

Any student who is indebted to the University and who fails either to make a satisfactory settlement of indebtedness upon receipt of due notice or to receive a special exemption will be disenrolled and will cease to be entitled to membership and privileges of the University. Such a student is not permitted to attend classes or examinations, or to be granted any official credentials. Re-enrolment in a subsequent session or year will not be permitted until such time as the debt is either paid in full, together with any enrolment reinstatement penalty fee (if appropriate) or agreement is reached between the student and the Registrar on the method of repayment.

In exceptional cases the Registrar may grant exemption from the provisions referred to in the preceding paragraph upon receipt of a written statement from the student setting out all relevant circumstances.

Enrolment Rules and Procedures

Enrolment

All students must re-enrol each year for the full academic year. Students who fail to enrol in accordance with advertised procedures or who enrol after the nominated date will incur a penalty fee.

By enrolling, students incur Student Activity Fees, tuition fee charges or liability under the Student Contribution Scheme.

Refer to myUNSW (<https://my.unsw.edu.au>) for full details of enrolment procedures and up-to-date fee information.

All students are required to confirm their enrolment details e.g. check that they are enrolled in the correct course(s) by accessing their online Fee Statement/Confirmation of Enrolment at <https://my.unsw.edu.au> prior to the session's census date. Any enrolment issues must be referred immediately to the Program Authority in writing.

A complete schedule of session and census dates is available on the website: <https://my.unsw.edu.au/student/resources/KeyDates.html>

1. New Undergraduate Enrolments

For application procedures, please see 'Admissions Procedures' above.

Successful applicants will be required to complete enrolment on the web via myUNSW and to complete any other procedures required by their program office before the start of session.

2. Re-enrolling Undergraduate Students

Re-enrolling undergraduate students are required to re-enrol on the web via myUNSW, and complete any other procedures required by their program office. Different enrolment procedures may apply for some programs, particularly some distance or alternative mode programs. In these instances, students should follow the instructions emailed or sent to them by their program office. Detailed information regarding enrolment is available on myUNSW and students should check this site regularly for updated information: <https://my.unsw.edu.au>

3. Re-enrolment Deadlines and Penalties

Students must enrol in accordance with the enrolment procedures for their program. The University has established enrolment deadlines and penalties for late enrolment or failure to enrol in accordance with program office requirements as follows.

Students who have an outstanding debt to the University will not be able to process any enrolment changes until the outstanding debt is finalised.

Students must access their Fee Statement online at <https://my.unsw.edu.au>. Students should refer to this online statement for payment deadlines and payment options.

(1) On the recommendation of the program authority, the Registrar may impose a penalty fee of \$100 on students who fail to enrol in accordance with their program office's instructions. Circumstances under which the penalty may be imposed include:

- failure to re-enrol by the deadline set by the University or the student's program office;
- failure to attend the program office to enrol on or by the published date where this is a requirement of enrolment for the program.

(2) Lodgement of a proposed enrolment, and acceptance of a student's enrolment, in Week 1 of session and subsequently, will incur a late enrolment penalty fee of \$250.

(3) Students who do not pay all the fees assessed on their fees statement (including up-front Student Contributions where relevant) by the end of the first week of teaching may have their enrolment cancelled.

4. Summer Session Enrolments

Students will be required to complete formal enrolment procedures prior to the commencement of their Summer Session of study. Enrolment at this time will be for a student's approved Summer Session program. Students must access their fee statement online.

5. Restrictions on Re-enrolling

Students whose progress is deemed to be unsatisfactory should follow the written instructions they have received from the Registrar.

6. Multiple Enrolment

The University has laid down the following rules on multiple enrolments:

(1) No person shall be permitted to enrol in a degree, diploma or certificate course at the University of New South Wales at the same time as he/she is enrolled for any other degree, diploma or certificate in the University

or at any other tertiary institution, except with the approval of the faculty or faculties concerned.

(2) The Registrar may suspend from enrolment any student who is found to be enrolled, without approval, in more than one degree, diploma or certificate course.

7. Non-Award Enrolment

Non-award enrolment refers to all enrolments in courses or a sequence of courses which do not lead to or count towards a formal award (e.g. degree or diploma) of the University of New South Wales. Non-award enrolments fall into two categories, voluntary and cross-institutional.

Applications to enrol as a non-award student must be made on the Non-Award Enrolment application form available from UNSW Student Central or the following website: www.unsw.edu.au/futureStudents/nonAward/sad/fsnacrossinst.html. Permission to enrol as a non-award student is conditional on the permission of the Head of School and authorisation from the Director, UNSW Student Services. Applicants should follow the instructions given to them with the application form.

8. Final Dates for Enrolling in Courses

No enrolments for Session 1 courses will be accepted from students after the end of the second week of Session 1, except with the express approval of the Registrar and the Head(s) of the School(s) concerned.

No enrolments for Session 2 courses will be accepted after the end of the second week of Session 2, except with the express approval of the Registrar and the Head(s) of the School(s) concerned.

9. Deadlines for Payment of Fees, Charges and Student Contributions

The University has set deadlines for the payment of all fees that are set out below. Students who do not pay all fees by the due date may be disenrolled. Students who are permitted to be reinstated following disenrolment will be required to pay a penalty fee of \$250 plus all outstanding fees before reinstatement.

Under Government legislation, a student who has elected not to provide their Tax File Number and has not made the required student contribution payment by the date set by the University, must have their enrolment cancelled. Such students will not be permitted to undertake studies in their program in that session as a Commonwealth supported student.

Session 1

Session 1 Student Activity Fees, Student Contributions and tuition fees:
Friday 3 March 2006

Session 2

Session 2 Student Activity Fees, Student Contributions and tuition fees:
Friday 28 July 2006

Variations in Enrolment (including Discontinuation and Program Leave)

1. Variation of Enrolment

Undergraduate students wishing to vary their enrolment program will be able to do so on the web (<https://my.unsw.edu.au>) at specified times throughout the year. Where a student is unable to successfully vary their enrolment online, or they are in doubt as to whether the courses they wish to enrol in will count towards their program requirements, they should contact their program office or appointed academic adviser for further advice.

It is a student's responsibility to ensure that they enrol in accordance with the University's rules, and that the courses they enrol in will count towards their program requirements. Students should take care to enrol only in classes that are defined as core units or electives for their academic program. If they enrol in classes that cannot be counted, they may have to enrol in extra classes, or for an extra session. They may also incur additional fees.

2. Variation of Summer Session Enrolment

Students may vary their Summer Session enrolment program on the web. Students should check with the relevant course authority for the last day to discontinue a course without failure, and for the census date for the course.

3. Discontinuation of Program

Students discontinuing programs are required to notify the Registrar in writing or to complete the discontinuation form available from UNSW

Student Central. Such students may be entitled to a fee refund for fees paid (see 'Student Fees' entry in this Handbook). The Registrar acknowledges discontinuation of a program in writing.

A new undergraduate student in Stage 1 of a program who discontinues that program without failure **prior to the census date** must reapply through UAC and is guaranteed re-admission to the same program the following year. A student who does not resume study in the following year must compete for a place, if and when re-admission is sought.

A new undergraduate student in Stage 1 of a program who discontinues **after the census date** may apply for leave for Session 2 prior to the Session 2 census date. It should be noted that discontinuation after the census date for a session may result in failures being recorded.

4. Discontinuation of Courses

Discontinuation of courses prior to the census date for a session can generally be processed by a student on the web (<https://my.unsw.edu.au>). All variations to course enrolments can also be confirmed by students on the web.

Students can discontinue a course online without academic and financial penalty until the census date.

Students can discontinue a course online without academic penalty until half session plus one week (the withdraw without academic penalty date).

Students should be aware that they will be financially liable for all courses in which they are enrolled as at the census dates.

Written applications to discontinue courses after the withdraw without academic penalty date may be lodged with the course authority but will result in students being regarded as having failed the courses concerned, except in special circumstances.

5. Program Leave

Leave from a program of study may be granted to undergraduate or postgraduate students. Leave is generally restricted to a total of two sessions; applications for leave in excess of two sessions will be approved only in exceptional circumstances at the discretion of the program authority.

Undergraduate students may be granted leave before commencement of the program. This type of leave, usually referred to as deferment of enrolment, will normally be granted once only and for a maximum of 2 sessions.

The following procedures apply:

- A request for leave should be made in writing to the Registrar either by letter or by using the Discontinuation/Leave form available from program offices and the Student Centres at each campus.
- Leave must be sought prior to the census date. For information about census dates, please refer to: <https://my.unsw.edu.au/student/resources/KeyDates.html>
- A student who discontinues a program with or without failure after the census date for a session retains an enrolment record for that session and is subject to the rules on student progression. A student who discontinues after the Session 1 census date may apply for leave for Session 2.
- A student whose application for leave is rejected or who does not resume study at the end of the approved leave period must formally apply, in the usual manner, for re-admission to the program.

Enquiries about re-admission to a program should be directed to the Admissions Office.

6. Resumption of Program

Students who have had leave for twelve months and wish to resume their program should follow the instructions about re-enrolling given in the letter granting leave of absence. If these instructions are not fully understood or have been lost, students should contact UNSW Student Central in the Chancellery before November in the year preceding the one in which they wish to resume their program.

If students have not obtained leave of absence from their program and have not been enrolled in the program over the past twelve months or more, they should apply for re-admission to the program through the Universities Admissions Centre before the end of September in the year preceding that in which they wish to resume studies or to the Admissions Office by the appropriate closing date.

Program Transfers

Local Students:

Students in the Faculty of Arts and Social Sciences who wish to transfer between the Bachelor of Arts, Bachelor of Social Science or Bachelor

of Arts/Bachelor of Education should apply to the Faculty Office in December.

Students in the Faculty of Commerce and Economics, who wish to combine either the Bachelor of Commerce with Arts, Science or Social Science, or the Bachelor of Economics with Arts or Social Science, should apply to the Faculty Office in December.

Students in the Faculty of Engineering who wish to combine their undergraduate engineering program with MEng, or MEngSc should apply to the relevant Engineering School Office in December.

Students in the Faculty of Law who wish to change their non-law program (e.g. Commerce/Law to Arts/Law) or major in their non-law degree (e.g. Accounting to Finance) should apply to the Law Faculty Office in December. Students who wish to transfer from a combined Law program to the single non-law program should apply to the Faculty Office of the program in which they wish to continue. Graduate Law students wishing to change from full-time to part-time study or vice versa should also apply to the Faculty Office in December.

Students wishing to change their plan within their current degree should apply to their Faculty Office.

All other local students wishing to transfer to an undergraduate program must apply through the Universities Admissions Centre (UAC) by the end of September (late applications are accepted until early February on payment of a late fee) or in May for mid-year transfers. Further information is available from the Admissions Office, telephone 1300 36 8679.

International Students:

All international students can apply for an internal transfer by completing the form available from UNSW Student Central or online via <https://my.unsw.edu.au>. For further information, international students may contact the Direct Admissions Office, tel: (+61 2) 9385 3656.

Progression Rules and Procedures

Attendance at Classes

Students are expected to be regular and punctual in attendance at all classes in the courses in which they are enrolled. All applications for exemption from attendance at classes of any kind must be made in writing to the Registrar.

In the case of illness or of absence due to other unavoidable causes students may be excused by the Registrar for non-attendance at classes for a period of not more than one month or, on the recommendation of the Dean of the appropriate faculty, for a longer period.

Absence from Classes

Explanations of absences from classes, or requests for permission to be absent from forthcoming classes, should be addressed to the Registrar and, where applicable, should be accompanied by a medical certificate. If examinations or other forms of assessment have been missed, this should be stated in the application.

If students attend less than eighty per cent of their possible classes they may be refused final assessment.

General Education Requirements

UNSW requires that undergraduate students undertake a structured program in General Education as an integral part of studies for their degree. General Education requirements are set out in detail in the General Education section of this Handbook.

Plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one's own.¹ Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying materials, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, website, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor change keeping the meaning, form and/or progression of ideas of the original;

- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or tutor; and;
- claiming credit for a proportion of work contributed to a group assessment item that is greater than that actually contributed.²

Submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered plagiarism.

Note that an assessment item produced in oral, not written, form, or involving a live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does not amount to plagiarism.

¹Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle.

²Adapted with kind permission from the University of Melbourne.

UNSW Policy on Plagiarism

At UNSW plagiarism is considered to be a form of academic misconduct and is viewed very seriously. UNSW is committed to helping students understand the conventions which govern academic communication to assist them avoid action which may result in academic misconduct.

In the interests of maintaining high standards in scholarship and research, the University reminds students that when they are writing essays, theses, and assessment items of any nature, they are ethically bound to refrain from plagiarism in all its forms. Students are advised to inform themselves about University policies and practices concerning assessment and Academic Misconduct (including plagiarism). Wherever possible, students should also take up those opportunities provided to them by the University to improve their academic and/or information literacy.

The UNSW Approach to Student Plagiarism

The UNSW approach to plagiarism is educative. The University wishes to foster a culture of learning informed by values of integrity and honesty and all staff and students are encouraged to consider their rights and responsibilities as set out in this Handbook.

UNSW is also committed to providing a consistent, fair and equitable approach to managing student plagiarism. It is therefore expected that Faculties and Schools will strive to ensure the fair, consistent and equitable treatment of students when handling student plagiarism, and adopt relevant policy, procedures and guidance provided by the University. It is also expected that staff will be conscientious in their evaluation of students' work and the identification of cases of possible plagiarism. All Faculties and Schools will provide students with discipline-specific examples of good and bad academic practice according to the conventions of the discipline, and provide specific advice regarding those techniques that will be required of students whilst studying at UNSW.

UNSW has published an e-document handbook for students, *Guidelines and Rules on Student Plagiarism*, which contains detailed information on UNSW's policy, approach and resources for students. UNSW has also developed an online information literacy tutorial (ELISE) to assist students. See *Further Information* below

The Learning Centre

The Learning Centre Plagiarism and Academic Integrity website is the central University online resource for staff and student information on academic honesty and understanding and avoiding plagiarism. It can be found at: www.lc.unsw.edu.au/plagiarism. The Learning Centre also provides substantial educational written materials, workshops, and individual assistance to aid students, for example, in:

- correct referencing and citation practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Further Information

Learning Centre's Plagiarism and Academic Integrity website: www.lc.unsw.edu.au/plagiarism/index.html

Guidelines and Rules on Student Plagiarism – Handbook for Students – online at www.lc.unsw.edu.au/plagiarism/link.html

ELISE online information literacy tutorial see *ELISE* under *Information Technology Rules and Procedures* in this Handbook and online at: <https://my.unsw.edu.au/student/atoz/ELISE.html>

Student Misconduct Rules see *Academic Misconduct and Student Misconduct* in this Handbook and online at: <https://my.unsw.edu.au/student/academiclife/assessment/StudentMisconductRules.html>

Assessment Policy, including Ethical Use of Scholarly Materials, see *Assessment Policy* in this Handbook and online at: <https://my.unsw.edu.au/student/academiclife/assessment/AssessmentPolicyIndex.html>

Academic Misconduct and Student Misconduct

1. Introduction

Students and staff are governed by the normal laws that regulate our daily lives. However, the University has its own code of rules and conduct. This is because good conduct and academic honesty are fundamental to the mission of the University as an institution devoted to the pursuit of excellence in scholarship and research, and to the service of society. These principles apply not only to students but also to the whole University community, including staff engaged in research. They have been developed over many years and are widely supported by staff and students. Staff and students are committed to good conduct and academic honesty and are keen to see that these values and principles are upheld.

The University is committed to helping students understand the conventions which govern academic communication and thereby to avoid action which may result in academic misconduct. Students are also advised to refer to Section 5 of the Assessment Policy (Ethical Use of Scholarly Materials) for further University policy advice as to the ethical use of scholarly materials, in addition to Section 7 (Rights and Responsibilities) which includes reference to the Rights and Responsibilities of the University, staff and student in this regard.

The University Council has defined student misconduct as follows (29 August 1994): “Student misconduct includes student academic misconduct and also encompasses conduct which impairs the reasonable freedom of other persons to pursue their studies or research or to participate in the life of the University.”

Section 2 provides an overview of the University’s rules regarding student academic misconduct, and of what kinds of activity constitute student academic misconduct according to current academic usage. Section 3 relates to further kinds of student misconduct, namely those that impair the reasonable freedom of others at the University.

It is very important that all students are familiar with the rules under which they attend the University, use University facilities, and are assessed. This is because students are responsible for managing their own conduct and for knowing what the University’s rules concerning good conduct are. Ignorance of the rules is not an acceptable defence against charges of misconduct.

If you have any concerns about what constitutes misconduct either in general or specific situations, make sure you discuss them with the relevant University authority. In academic matters this will usually be the lecturer in charge of a particular course. You can also seek general advice from the Registrar through the UNSW Student Services.

2. Academic Misconduct

These notes describe the University’s policy on academic misconduct and define actions and behaviour which constitute misconduct. They include a description of procedures followed by the University where misconduct is alleged and penalties which the University may impose on students guilty of misconduct.

2.1 What is academic misconduct?

The University Council has defined academic misconduct as follows (29 August 1994):

Student academic misconduct means:

- (a) breach of such rules or guidelines relating to student academic conduct as may be prescribed by faculties, schools or the Vice-Chancellor;
- (b) misconduct relating to assessment or examinations; and
- (c) any other conduct (the general nature of which has been made known to students) regarded as student academic misconduct according to current academic usage.

2.2 Types of academic misconduct

It is important that students realise just how broad the definition of academic misconduct may be. It certainly covers practices such as

cheating or copying or using another person’s work. Furthermore, practices that may be acceptable in other situations are considered to be misconduct according to current academic usage within a University.

The following are important examples of the actions that have resulted in students being found guilty of academic misconduct in recent years:

Misconduct concerning examinations

- taking unauthorised materials into an examination;
- impersonation in examinations;
- permitting another student to copy answers in an examination;
- exchanging notes between students in an examination;
- improperly obtaining prior knowledge of an examination paper and using that knowledge in the examination;
- removing an examination paper from an examination room when it is specified that the paper is not to be retained by the student;

Misconduct concerning academic works

Plagiarism is the presentation of the thoughts or work of another as one’s own. See *Plagiarism* in this Handbook for further information.

Misconduct through misrepresentation

- submitting a falsified medical certificate;
- submitting a falsified academic transcript.

Two instances of academic misconduct – plagiarism and cheating in exams – are discussed in further detail below in Sections 2.3.1 and 2.3.2.

2.3 Specific examples of academic misconduct

The following are two examples of academic misconduct that have been detected frequently in recent years. Penalties imposed on students found guilty of misconduct in these areas have included failure in the course and exclusion from the University for periods as long as five years.

2.3.1 Plagiarism and failure to acknowledge sources

Plagiarism involves using the work of another person and presenting it as one’s own. Acts of plagiarism include copying parts of a document without acknowledging and providing the source for each quotation or piece of borrowed material. These rules against plagiarism apply whatever the source of the work relied upon may be, whether printed, stored on a compact disc or other medium, found on the World Wide Web or Internet.

Similarly, using or extracting another person’s concepts, experimental results or conclusions, summarising another person’s work or, where, there is collaborative preparatory work, submitting substantially the same final version of any material as another student constitutes plagiarism.

It is your responsibility to make sure you acknowledge within your presented work where you have “sourced” the information, ideas and facts etc.

The basic principles are that you should not attempt to pass off the work of another person as your own, and it should be possible for a reader to check the information and ideas that you have used by going to the original source material. Acknowledgment should be sufficiently accurate to enable the source to be located speedily. If you are unsure whether, or how, to make an acknowledgment consult your lecturer.

The following are some examples of breaches of these principles:

- (a) Quotation without the use of quotation marks. It is a serious breach of these rules to quote another’s work without using quotation marks, even if one then refers to the quoted source. The fact that it is quoted must be acknowledged in your work.
- (b) Significant paraphrasing, e.g. several sentences, or one very important sentence, which in wording are very similar to the source. This applies even if the source is mentioned, unless there is also due acknowledgment of the fact that the source has been paraphrased.
- (c) Unacknowledged use of information or ideas, unless such information or ideas are commonplace.
- (d) Citing sources (e.g. texts) which you have not read, without acknowledging the ‘secondary’ source from which knowledge of them has been obtained.

These principles apply to both the text and footnotes of sources. They also apply to sources such as teaching materials, and to any work by any student (including the student submitting the work) which has been or will be otherwise submitted for assessment. You must obtain the prior approval of your lecturer if you wish to submit to that lecturer an essay substantially similar to one which has already been, or will be, submitted to another lecturer.

Using the principles mentioned above about proper acknowledgment, you should also proceed on the general assumption that any work to be

submitted for assessment should in fact be your own work. It ought not be the result of collaboration with others unless your lecturer gives clear indication that, for that assignment, joint work or collaborative work is acceptable. In this latter situation, you should specify the nature and extent of the collaboration and the identity of your co-workers.

2.3.2 Unauthorised materials in exams

The possession of unauthorised materials in exams is another common example of academic misconduct. The University's rules for the conduct relating to examinations state that no materials are to be brought into the examination room other than those specified in the examination timetable.

The following are examples of materials which would be regarded as unauthorised (and if not specified as being permitted in the examination):

- (a) A bag, writing paper, blotting paper, manuscript or book, other than the specified material;
- (b) A mobile telephone brought into the examination room must be switched off and placed under the candidate's seat for the duration of the examination;
- (c) Written or printed notes of any kind or size;
- (d) Writing on the hand or any other part of the body;
- (e) Writing on a ruler or any other instrument;
- (f) A calculator or hand-held computer where these are not permitted or where calculators are supplied by the University for the examination.

It does not matter whether or not the notes or writing are relevant to the exam. It does not matter that the notes are inside your pocket or a closed pencil case. It also does not matter that writing on the body is illegible. It is academic misconduct simply to be in possession of such notes and writing, or to have writing on your body, in the first place.

There are simple steps that you can take to ensure they do not infringe the University's rules for examinations:

- Read the examination timetable carefully and make sure you fully understand what materials are permitted in the exam;
- Place all bags and belongings outside or at the front of the room before the exam commences;
- Check your pockets and inside any pencil cases or calculators to ensure that you haven't accidentally left notes in them;
- Listen carefully to the instructions given to you by the examination supervisor. Ask for assistance if you have any questions about the rules and arrangements for the examination;
- Surrender any unauthorised notes or other materials before the exam begins: if you are found with these after the exam commences you will have broken the examination rules.

2.4 Penalties

Students found guilty of academic misconduct may be excluded from the University for up to two years, depending on the individual circumstances. In serious cases, penalties may include permanent exclusion from the University.

2.5 Breach of Discipline and Misconduct in Assessment Procedures

The University has detailed procedures for dealing with allegations or complaints of academic misconduct. Please contact UNSW Student Central or refer to the following website: <https://my.unsw.edu.au/student/academiclife/assessment/BreachDisciplineMisconductProcedures.html>

3. Student Misconduct

3.1 University Rules and Codes of Conduct

While the University has not formulated a formal general code of conduct, it has defined rules and good practice for many activities. That is, a number of areas within the University have specified rules and codes of conduct for particular activities for the use of facilities. For example, there are rules for the conduct of examinations, rules for borrowing privileges and the use of other University Library resources, and behaviour in the Library. The Division of Information Services has also formulated rules for the use of computers and computer laboratories, and for behaviour in laboratories. These rules are publicised to all users of these facilities.

There are, in addition, University rules governing general student conduct. These are described below.

3.2 What is student misconduct?

Student misconduct is of a kind that impairs the reasonable freedom of other persons to pursue their studies or research or to participate in the life of the University includes such activity as:

- (a) breach of any rule relating to student conduct in the University;

(b) conduct which unduly disrupts or interferes with a class, a meeting or any other official activity within the University;

(c) conduct detrimental to University property, such as stealing, destroying or deliberately damaging laboratory equipment;

(d) stealing, destroying, impairing the accessibility of, or defacing any part of the University Library collection;

(e) using University computing or communications facilities in a manner which is illegal or which will be detrimental to the rights and properties of others;

(f) acting so as to cause students or staff or other persons within the University to fear for their personal safety;

(g) refusing or failing to identify oneself truthfully when so required by a member of the academic staff or other officer of the University.

3.3 Penalties

The following penalties may apply:

(a) A student who commits a breach of the University parking rules or damages University property (including, but not limited to fittings, fixtures, equipment, facilities, trees, plants, shrubs, and lawns) shall be guilty of a breach of discipline and shall be liable for the payment to the University of a fine not exceeding \$1,000 and/or the cancellation of her or his parking permit.

(b) A student who misuses University Library facilities, or computing or communications facilities, shall be guilty of a breach of discipline and shall be liable for the payment to the University of a fine not exceeding \$1,000 and/or restriction or withdrawal of borrowing or access privileges.

(c) Fines and other penalties may only be imposed under these rules by the Registrar, the Chief Information Officer, or a person who holds a written delegation from either officer so authorising her or him.

(d) It shall not be necessary for the University to prove in any case that it has suffered financial or actual loss.

(e) The University may withhold any benefit (including any degree, diploma or result) from a student until any penalty imposed under these rules has been discharged.

(f) Students adversely affected by determinations made and penalties imposed under this rule may appeal to the Vice-Chancellor. The appeal must be in writing and lodged within fourteen days of the student receiving notification of the adverse determination. Such notification shall include notice of the student's right of appeal. In all other respects, action under this rule is final.

In addition, in situations where it is considered that students present a threat of destruction to University property and/or disruption of academic instruction, assessment, examinations, and the proper functioning of the University, they may be temporarily suspended from part or all of the University.

3.4 Student Misconduct Procedures

The University has detailed procedures for dealing with allegations or complaints of student misconduct. The full text of the Council resolution on student misconduct, which contains details of these procedures, can be obtained from UNSW Student Central or the following website: <https://my.unsw.edu.au/student/academiclife/assessment/StudentMisconductRules.html>

Academic Standing

At the end of every standard 14-week session the University determines each undergraduate or coursework postgraduate student's Academic Standing in his or her program of study.

The purpose of specifying a student's Academic Standing is to alert the student and his or her program authority as early as possible to any problem that may prevent the student graduating in minimum time, or (in more extreme cases) that may prevent the student graduating at all. With early intervention by a University academic advisor, the more serious consequences of a student's continued poor performance may be prevented. Academic Standing is determined differently for undergraduate and postgraduate students.

Academic Standing for Undergraduate Students

A student's Academic Standing is determined by two factors: his or her academic standing at the end of the previous standard 14 week session and his or her academic achievement in the current 14 week session. In normal circumstances, academic achievement is classified as satisfactory if the number of units of credit in all courses passed is at least half the total number of units attempted. If it is not satisfactory, academic achievement

is classified either as poor if some units are passed (but fewer than half the total number attempted), or nil if no units at all are passed. If 6 or fewer units of credit are attempted, then academic achievement is classified as indeterminate if any of these units are passed, or as poor if no units at all are passed.

Table 1 indicates how each academic achievement classification is determined. The far right-hand column describes how a student's academic standing at the end of the current session is derived from that student's academic standing at the end of the previous session.

Table 2 lists the undergraduate academic standing categories and their implications. Each student not in Good Standing is assigned an academic adviser, whom the student consults to discuss his or her progress, plans for improving results, and future enrolment options. The student is also encouraged to contact other University services, especially the Counselling Service and the Learning Centre, who can offer advice on ways in which the student may enhance his or her academic performance.

The usual effect is modified in certain situations:

- as it is not possible to skip Suspension, a student whose previous standing was Probation 2 must pass at least half of the attempted units to avoid Suspension. A similar rule applies to Probation 4 in respect to Exclusion.
- after Suspension, a student is assigned Probation 3. The student may then be assigned to Probation 1, if he or she passes half of the attempted units in the first session after returning (i.e. during Probation 3) from Suspension. Thus, two successive satisfactory sessions are required for Good Standing to be regained. If poor progress is recorded the student moves to Probation 4. If nil progress is recorded the student moves to Exclusion and
- in exceptional circumstances a student's academic adviser, in consultation with the program authority, may alter the student's standing. The usual action in this case is to retain the previous standing or to move the standing one step instead of two.

Academic Standing – Re-Enrolment Appeal Procedures

In June 2000, the University's Academic Board adopted the following rules governing appeals against suspension or exclusion:

- (1) Students who are suspended or excluded from a program have the right of appeal. An Undergraduate Re-enrolment Appeal Committee and a Postgraduate Re-enrolment Appeal Committee of the Academic Board will be constituted for the purpose of hearing such appeals.
- (2) Each Committee will have a membership of five members of academic staff (with a quorum of three) and will be chaired by a member of the Academic Board nominated by the President. The remaining members of the Committee need not be members of the Academic Board but will be nominated by the President taking into account their relevant experience and expertise. Members will not currently be involved in

managing student progress and will disqualify themselves if they have previously been involved in the case of a particular student.

(3) The decision of the Committee shall be final.

(4) The notification to students that they have been suspended or excluded shall indicate that they may appeal that decision to the relevant Re-enrolment Appeal Committee. The appeal must be lodged with the Registrar within fourteen days of the date of notification; in special circumstances a late appeal may be accepted at the discretion of the chairperson of the Appeal Committee.

(5) In lodging such an appeal with the Registrar, students should provide a complete statement of all grounds on which the appeal is based.

(6) The Appeal Committee shall determine appeals after consideration of each appellant's academic record and stated grounds of appeal. Students may elect to appear before the Committee and/or be represented.

Academic Standing - Re-admission after Suspension or Exclusion

Students who are suspended for one year have an automatic right of re-admission to the program in which they were previously enrolled.

Students who are excluded must re-apply for re-admission. Local undergraduate students re-apply through the Universities Admissions Centre; international undergraduate students re-apply through the Direct Admissions Office of the University. Applications should include evidence that the factors that contributed to the earlier failure no longer apply and any action taken to demonstrate the students' ability to resume studies.

Assessment

(See also 'Assessment Policy' under 'Other University Policies & Procedures')

Assessment of Progress

In the assessment of a student's progress in a program, consideration may be given to work in laboratory and class exercises and to any term or other tests given throughout the year, as well as to the results of written examinations.

Results of Assessment

Assessment result advices include the final composite marks students achieve in courses taken that session.

Passes are graded as follows:

High Distinction: an outstanding performance

Distinction: a superior performance

Credit: a good performance

Pass: an acceptable level of performance

Satisfactory: satisfactory completion of a course for which graded passes are not available

Table 1: The effect of the current session's achievement on Academic Standing:

Units of credit attempted	Units of credit passed	Achievement	Usual effect on Academic Standing
6 or fewer	Any	Indeterminate	Remains unchanged
6 or fewer	None	Poor	Moves one category down
More than 6	Half or more	Satisfactory	Moves up one category
More than 6	Some, but less than half	Poor	Moves one category down
More than 6	None	Nil	Moves two categories down

Table 2: The implications of undergraduate Academic Standing categories:

Academic Standing	Implications for the student
Good Standing	May continue in program
Referral	Recommended to consult Faculty advisor to discuss academic progress
Probation 1	Required to consult assigned advisor who advises on and approves next session's program
Probation 2	Required to consult assigned advisor, who approves next session's program. Student must improve to avoid suspension
Suspension	Not permitted to re-enrol for two standard sessions (one year)
Probation 3	Return from suspension period
Probation 4	Required to consult assigned advisor, and must improve to avoid exclusion
Exclusion	Excluded from the University for four standard sessions (two years)

Pass Conceded: this may be granted provided that the overall performance is considered to warrant such a concession. A Pass Conceded in a course will allow progression to another course for which the former course is a prerequisite.

For more information, please refer to the 'Guide to UNSW Grades', expressing grade distributions in international terms: <https://my.unsw.edu.au/student/academiclife/assessment/GuideToUNSWGrades.html>

Notification of Results

Assessment results are available on the web via <https://my.unsw.edu.au>. You will need your Student ID and UniPass to use these services.

Review of Results

A student may make application to the Registrar for the review of a result. The application form must be submitted not later than fifteen working days after the date of confirmation of assessment results via the web.

A review of result may take one of two forms:

- (1) Checking that all marks have been included in the final composite mark.
- (2) An academic reassessment of a piece of work. Before applying for a reassessment, students must first discuss their performance in the course with the course examiner. If students still have reason to believe that the mark awarded does not reflect their performance, they may apply for reassessment. Reasons must be given to justify a request. Requests may be refused where insufficient reasons are put forward.

Examinations

Examinations are held in June/July and in November/December.

It is inadvisable for students to make any vacation travel arrangements within the examination period until dates for all assessment requirements have been finalised.

Provisional timetables are posted on the University website/intranet in May and October.

Final timetables are posted on the University website/intranet in May and October.

Clash of examinations: Students must advise UNSW Student Central of any clash in examinations as soon as the provisional timetable is released.

The following website provides important information about the rules and procedures governing examinations at UNSW. It is the students' responsibility to be aware of these rules and procedures: <https://my.unsw.edu.au/student/academiclife/assessment/examinations/examinations.html>

Special Consideration – Illness and Misadventure

On some occasions, sickness, misadventure, or other circumstances beyond students' control may prevent them from completing a course requirement or attending or submitting assessable work for a course. Such assessable requirements may include formal end of session examination, class test, laboratory test, seminar presentation, etc. It is also possible that such situations may significantly affect your performance in an assessable task. The University has procedures that allow students to apply for consideration for the affected assessments. Depending on the circumstances, the University may take action to allow students to overcome the disadvantage; e.g. offer an additional assessment or extend a deadline.

Students should note that merely submitting a request for Consideration does not automatically mean they will be granted additional assessment, nor that they will be awarded an amended result. For example, if a student has a poor record of attendance or performance throughout a session/year in a course, the student may be failed regardless of illness or other reason affecting a final examination in that course.

The University has a centralised procedure for Consideration applications. Many course authorities and faculties have 'local' procedures that students will also need to follow.

It sometimes happens that a student may encounter a situation that is so significant or personal they do not want to use the Special Consideration procedures. In a case like this you may prefer to contact the University Health Service, the Counselling Service, an academic advisor in your program office or the Assistant Registrar in the Student Information and Systems Office. Remember that it is always important to let the University know if there is anything that may affect your ability to continue your studies.

How to apply for Consideration

A student must make formal application for Consideration for the course/s affected as soon as practicable after the problem occurs and within three working days of the assessment to which it refers.

The application must be made on the 'Request for Consideration' form available from UNSW Student Central (or the Student Centre at your campus), from faculty and program offices, the University Health Service, the Counselling Service or from the web at: <https://my.unsw.edu.au/student/atoz/SpecialConsideration.html>

To assist you the 'Request for Consideration' form has a sheet attached explaining the procedures and the information required. The form and information sheet must be taken with you when you obtain the certification so as to ensure all the key information is provided.

The completed application form must be submitted to the Student Centre at each campus.

Applications are accepted only in the following circumstances:

1. Where academic work has been hampered to a substantial degree by illness or other cause. Except in unusual circumstances a problem involving only three consecutive days or a total of five days within the teaching period of a session is not considered sufficient grounds for an application.
2. The circumstances have to be unexpected and beyond your control. Students are expected to give priority to their University study commitments and any absence must clearly be for circumstances beyond your control. Work commitments are not considered a justification.
3. An absence from an examination should be supported by a medical certificate or other document that clearly indicates you were unable to be present.
4. A student absent from an examination or who attends an examination and wants to request special consideration is normally required to provide a medical certificate dated the same day as the examination.
5. An application for special consideration has to be provided within three working days of the assessment to which it refers. In exceptional circumstances an application may be accepted outside the three-day limit.

To give the University sufficient and appropriate information on which to base its decision about your request, you must support your application with certified official documentation that normally contains at least the following key information:

- (1) the assessment task/s for which you are seeking consideration
- (2) the dates/deadlines associated with these tasks
- (3) the basis of your request i.e. the nature of your misadventure, illness, etc.
- (4) the date/s on which you were seen by the professional/authority providing your official documentation
- (5) the date of the illness or misadventure or the dates of the period of time of the illness or misadventure
- (6) the professional's/authority's assessment of the severity of your illness or misadventure and opinion of the likely effect on your capacity to undertake the assessment task/s concerned.

Items 4. to 6. need to be certified by the provider. For example, by your medical practitioner or other health professional (for illness or injury) or counsellor (for personal or family problems), so you will need to make the provider aware of the University's requirements.

For causes other than sickness, (e.g. road accident, court hearing, or death of a relative) written evidence (e.g. a police report, a court summons, or a death certificate) instead of the documentation required in 6 above is acceptable (i.e. Section B of the Consideration form need not be completed).

You should note that Consideration requests normally will not be considered:

- unless the application is made on the appropriate form;
- unless all the key information is provided;
- if more than 3 days have elapsed since the assessment for which Consideration is sought;
- if the assessment task is worth less than 20% of the total course assessment, unless the student can provide a Medical Certificate that covers three consecutive days.

In exceptional circumstances the University may waive these requirements, for example, if an accident or sudden illness occurs which requires your immediate hospitalisation.

You also need to follow any local procedures of the relevant course or program authority. You will have been informed of these procedures by the course authority or faculty representative in the course brochure/information sheet made available to you upon commencement of the course or program. For example, as well as submitting your application through UNSW Student Central, the course authority may require you to contact them.

If you need advice about any of the policies or procedures relating to Consideration contact UNSW Student Central.

What happens after you make the application

If your application meets the University's criteria for acceptance, it is stamped, a copy is taken and the original is returned to you. Only documentation that meets the requirements listed above will be accepted. No consideration will be given when the condition or event is not related to performance or is considered not to be serious.

Details, including the summary information provided by you, are made available to the relevant course authority/faculty. The University's procedures ensure that confidentiality of this information is maintained.

Note that many course authorities require you to take action within a specified period of time to determine the outcome; for example to consult the course authority's notice board, to contact the authority in person or by phone, etc. Details of the arrangements will have been made available to you in the course information sheet. Failure to take this action will normally result in forfeiture of any additional assessment granted to you.

On the basis of the information provided in your application, a decision is made regarding the appropriate response in your particular case. The following may be taken into account:

1. Your performance in other items of assessment in the course.
2. The severity of the event.
3. Academic standing in other courses and in the program.
4. History of previous applications for special consideration.

For enquiries relating to your application, please contact the relevant course authority or head lecturer of the course.

What outcomes you can expect

If an application for illness or misadventure is accepted, the following may ensue:

1. No action.
2. Additional assessment or a supplementary examination. Additional assessment may take a different form from the original assessment. If you are granted additional assessment, the original assessment may be ignored at the discretion of the course authority. Consequently, a revised mark based on additional assessment may be greater or less than the original mark.
3. Marks obtained for completed assessment tasks may be aggregated or averaged to achieve a percentage.
4. The deadline for assessment may be extended.
5. Discontinuation from the course. This is unlikely to occur after an examination or final assessment has taken place.

The following examples are included to give an indication of the outcomes you can expect in the most common circumstances. (Many course authorities include similar examples for the special types of assessment used by them in their course information sheets.)

Formal end of session examinations

- If you miss such an examination through an illness, other circumstance beyond your control, etc., which is certified as being severe enough to have prevented your attendance, in general, you will be granted additional assessment. This is usually in the form of a supplementary examination.
- If you attend an examination but prior to it an illness or other circumstance beyond your control occurs which, because of its duration or severity, is certified as having a significant effect on your preparation for that course, in general you will be granted additional assessment. This is usually in the form of a supplementary examination.

Note: In either of these cases if you have attained a Pass in the course concerned from assessment tasks completed during session, it may not be regarded as necessary to grant you additional assessment.

- If you attend an examination but have an illness on the day, which is either certified as not having a significant effect on your performance (such as a minor head cold), or for which you were examined after the illness had subsided, you will not be granted additional assessment.

Class tests, laboratory examinations, vivas

The same types of outcomes as outlined above for formal end of session examinations normally will apply in the circumstances listed.

Essays, reports, mini-theses, models, creative work, etc.

If an illness or other circumstance beyond your control occurs which, because of its duration or severity, is certified as having a significant effect on your ability to submit the work by the deadline given, you will generally be granted an extension of the deadline. You should not, however, expect the deadline to be extended for a time in excess of the period for which the certification was given.

Field work, practical placements, etc.

Each course authority conducting field work etc. has in place appropriate mechanisms for dealing with consideration for these type of assessments. Details are provided in the relevant course information sheets.

Additional assessment

The time at which any additional assessment granted to you is held, is determined by the course authority concerned. Consult the course information sheet for detailed information about the times and arrangements for the various additional assessment tasks in that course.

Most course authorities conduct supplementary examinations in the period immediately after the formal end of session examination period. For example, for the end of Session 2, supplementary examinations are often held in the three-week period just prior to Christmas. In general, course authorities will provide only one opportunity for you to sit a supplementary examination except in exceptional circumstances. You need to ensure you will be available during this period to take any supplementary examination granted to you.

You should expect any additional assessment granted to you to be of the same degree of difficulty as the original assessment task which it replaces.

Student Contact Details

It is essential that students maintain current email and postal addresses.

The University cannot accept responsibility if official communications fail to reach students who have not amended their postal and/or email address as soon as possible after any change of postal and/or email address. See also *Email Policy* in this Handbook.

Student ID Card

All students enrolling at the University are issued with a student identification card. The number appearing on the card is the student identifier used in the University's records. This number should be quoted in all correspondence.

(1) The card must be carried at the University and shown on request. It must be presented when borrowing from the University libraries, when using library facilities and when applying for concessions. The card is encoded by University Security to allow building access.

(2) The card is not transferable.

(3) The student to whom the card has been issued must notify the University Security (*e-spot@unsw* located in the Red Centre) of its loss or theft. Failure to do so may result in the cardholder being held responsible for items issued on the card after its loss or theft.

(4) The card is valid only for the period of enrolment each year.

(5) The cardholder accepts responsibility for all library books issued on his/her card and agrees to return books by the due date.

(6) If the card is damaged or becomes otherwise unusable, it is the cardholder's responsibility to seek replacement.

(7) The card always remains the property of the University and must be returned to it when the holder leaves the University.

Note: Students may be required to provide photo identification such as a driver's licence or passport in special circumstances where their student ID card does not satisfactorily verify their identity.

Graduation

The University's policy is to graduate at the next series of ceremonies all students who have completed requirements for their degree or diploma in the previous academic session. Graduands who are indebted to the University will not be permitted to graduate until the debt has been cleared.

The University usually holds graduation ceremonies in the following periods:

March/May: All degrees and diplomas

June/July: Overseas graduation ceremonies in Hong Kong and Singapore/Kuala Lumpur. (No ceremony will be held in Kuala Lumpur in 2006).

September/October: All degrees and diplomas

December: University College, Australian Defence Force Academy. Undergraduate and research degrees within the Faculty of Medicine.

Updated graduation information is posted on the myUNSW website each session before results for that session are released.

All graduands and potential graduands are expected to read the detailed graduation information on myUNSW, and to check their graduation details. In particular, graduands and potential graduands should check that their name, address and degree details are correct. The website is located at: <https://my.unsw.edu.au/student/academiclife/graduations.html>

Queries regarding graduations can be directed to the Graduations Section on (02) 9385 3092 or graduations@unsw.edu.au.

Information Technology Rules and Procedures

Introduction

The University is committed to using technology to support teaching and learning. For information on the IT resources and services available to students, please refer to 'Information Technology Services' in the 'Student Services and Resources' section below.

The rules and procedures relating to information technology at UNSW are detailed below.

Please note that students undertaking computing studies in any program are responsible for ensuring that they have appropriate back-ups of their work. Furthermore, work should not be stored on University computers as its security cannot be guaranteed by the University. Students who alter or delete another person's work may be committing a criminal offence. Students should also note that it is against UNSW policy to knowingly spread computer viruses.

UniPass

UniPass is the Universal Password System that allow students access to UNSW Online Services and the University-wide network. New students will be required to set up their personal online student account in order to access the online services. All new students must also activate their student account by agreeing to the terms and conditions of use of UNSW's electronic services. For more information, visit: www.disconnect.unsw.edu.au/student/zhome.htm.

ELISE (Enabling Library and Information Skills for Everyone)

Information literacy is a UNSW graduate attribute. For commencing students, a basic level of information literacy is necessary to enable each student to undertake their academic program effectively. It has been found that many students, regardless of their UAI, or other entry criteria, do not clearly understand the use of information in the university environment.

ELISE is a mandatory online tutorial on how information is organised and used in the University context. It is a university requirement for all new undergraduate and postgraduate coursework students to complete the tutorial and attain at least 80% in the ELISE quiz following the tutorial.

More information is available from:

<http://my.unsw.edu.au/student/atoz/ELISE.html>

The ELISE tutorial and quiz is accessible from the Web CT homepage:

<http://webct.edtec.unsw.edu.au/webct/public/home.pl>

Email Policy

Each student is given an email address as part of his or her enrolment at UNSW. It is essential to check email regularly since this is the main mode of formal communication between students and the University.

All students have a central email address of the form z1234567, where '1234567' is the student number. It is a **requirement** that all students read email that is sent to this address, as it may contain vital administrative or

teaching material **not provided any other way**. If a student uses an email account other than the centrally provided UniMail account, the student **must** arrange to forward UniMail to an account that they do use.

For the complete policy on electronic mail, please see: www.its.unsw.edu.au/policies/policies_home.html

IT Requirements for UNSW Students

Please refer to the following website for home computer guidelines or contact the IT Service Desk on (+61 2) 9385 1333:

www.its.unsw.edu.au/policies/policies_home.html

Rules for the Use of Computing and Electronic Communications Facilities for Students

UNSW policy is to facilitate the use of information resources by the provision of appropriate and timely technology solutions and technical assistance, and a key strategy of the UNSW Corporate plan is to use information technology in support of the educational, research and administrative activities of the University. Making information technology more readily available contributes significantly to improving academic quality and student access.

While at UNSW, students are responsible for ensuring that their use of computing and communications facilities is ethical and lawful. They are responsible for ensuring that their actions are not detrimental to the property of the University and the rights of others. The following rules, which have been made by Council under the University's Student Misconduct Rules, apply across all UNSW facilities. In certain local systems, additional restrictions may apply. The manager of those local resources will advise these additional restrictions. These rules apply to all student use of University computing or communications facilities. By using any of these facilities, the student is acknowledging that they have read and will abide by these rules. Breach of any of these rules may be considered student misconduct.

1. Definitions

1.1 "account" refers to any computing or electronic communication resource allocated for sole or shared usage by a student and protected from general usage by a security system. Such a resource might include, but is not limited to, storage space; access to a computer terminal; processor time; printed output or dial-up access time. A security system might include, but is not limited to, password protection.

1.2 "communications" refers to the use of any of the University's computing and/or electronic communications facilities, including, but not limited to, the University Wide Network, the modem pool, telecommunications, PABX and facsimile equipment to access or transmit information.

1.3 "computing facilities" refers to:

(1) all networked services and computer hardware and software, owned, leased or used under licence by the University including the University's academic and administrative systems;

(2) computing facilities maintained by other bodies but available for use through an agreement or agreements with UNSW; and

(3) all other computing facilities, wherever situated, where access is by means of UNSW-provided services.

1.4 "University" means the University of New South Wales.

1.5 "user" means any person or persons utilising, accessing or attempting to gain access to the computing or communications facilities at UNSW.

Any reference to the singular includes a reference to the plural and vice-versa in these rules.

2. Legal framework

Users of computing and communications facilities must be aware that use of these facilities is subject to the full range of State and Federal laws that apply to communications and to the use of computers, as well as any other relevant laws. This includes copyright, breach of confidence, defamation, privacy, contempt of court, harassment, vilification and anti-discrimination legislation, the creation of contractual obligations, and criminal laws.

3. Access

3.1 Access to the University's computing and communications facilities is available to students for teaching, research and administrative purposes, and for other specifically authorised activities.

3.2 Students are entirely responsible for their own accounts and any actions or materials resulting from any use of their accounts.

3.3 The University reserves the right to withdraw the availability of any computing or communications facility without notice.

3.4 Students may use only those facilities to which they have been given specific access by the University or which have been advertised for general student usage, and to the extent and in the manner that they are authorised to use them.

3.5 Students are not to assist persons who do not normally have access to a resource to obtain such access.

4. Non-permitted uses

The following uses and/or activities are not permitted:

4.1 Any use not related to University teaching, learning and research, unless specifically authorised by the University. If a student is unclear of his/her access for purposes unrelated to University teaching, learning and research, clarification should be sought from the relevant University system manager or student supervisor.

4.2 Any commercial purpose.

4.3 UNSW facilities are not to be used for:

(1) the deliberate or negligent preparing, storing, displaying of racist, pornographic or other offensive material,

(2) the deliberate receiving or transmitting of racist, pornographic or other offensive material unless it is a requisite component of a program of study and has the approval of the relevant lecturer or supervisor.

4.4 Use of the facilities to harass any person (whether within or outside the University) or interfere with their work. Examples of breaches to this rule could include the sending of obscene, abusive, fraudulent, threatening or repetitive messages, as well as unsolicited non-University work-related email.

4.5 Tampering with other users' accounts in any way, including attempting to thwart the system security, setting password traps, and any other behaviour designed to interfere with other users' access to the facilities.

4.6 Use of other users' accounts, a false identity or another person's identity to gain access to any aspect of the facilities.

4.7 Allowing or assisting another person to obtain access to resources or information not authorised.

4.8 Smoking, eating or drinking in computer laboratories or while using computing facilities at the University.

4.9 Behaviour that impacts adversely on other users in shared spaces, such as making unreasonable noise.

4.10 Deliberately or negligently interfering with the operation or performance of a system by:

- generating excessive load, use of storage capacity, network traffic, etc.;
- physically damaging or adjusting the equipment. Any such tampering, vandalism, theft or wilful and/or reckless damage may be referred to the police;
- introducing viruses or other software components designed to interfere with the normal operation of a system;
- deleting, adding or modifying information relevant to the system's operation;
- obtaining extra resources without authorisation;
- excessive printing;
- creating excessive network links.

4.11 Circumventing, or attempting to circumvent security or obtaining or attempting to obtain information that would allow security to be circumvented.

4.12 Using a resource not allocated or accessing material not permitted, whether by breaching security, using another's account or taking advantage of another person's negligence. This includes the use of resources in amounts or to a degree other than authorised.

4.13 Copying, disclosure of, transferring, deleting, examining, renaming, changing or adding to software, data or information belonging to UNSW or another person unless permission has been granted or the software, data or information is clearly intended to be public.

4.14 Activities that impact adversely on the University's reputation.

5. Copyright and licences

Students will not copy, disclose or transfer any computer software on the computing and communications facilities provided by the University in such a way as to breach any right of any person (including copyright) without the express written permission of the appropriate University officer or head of school/unit/centre.

6. Security

6.1 The University wishes to maintain a secure, efficient computing and communications environment. It has the right to examine all computer files and to monitor computer usage to ensure compliance with these rules.

6.2 If necessary, computer processes that are actively causing a problem will be terminated, or access to any files related to a breach of the rules removed.

7. Related Documents

These rules operate together with other relevant policies, rules and guidelines of the University on the use of its facilities and resources. These include:

- Student Misconduct Rules
- Breach of Discipline and Misconduct in Assessment
- Email Policy.

8. Breaches

Students found in breach of these rules are liable to disciplinary action under these rules and the Student Misconduct Rules. Disciplinary action could result in a warning, a reprimand, suspension of access to computing facilities, a fine or exclusion from the University for a period.

9. Schedule of Fines

The Chief Information Officer may impose fines of up to \$1,000.

Website Policy

The increasing reliance on UNSW websites as a means of communicating information and providing services has resulted in the need for an updated and consolidated University website policy.

The scope of this policy includes personal websites. Personal websites are defined as sites owned by, or affiliated to, students and hosted by the UNSW network. It also includes sites hosted on the UNSW network which are affiliated with, but not controlled by UNSW e.g. the Student Guild, Student Union, Kingsford Legal Centre.

The complete UNSW Website Policy is accessible at: www.its.unsw.edu.au/policies/pol_web.html

Other University Policies and Procedures

Access to Assessment Information and Freedom of Information

The University of New South Wales is committed to a policy of openness regarding exchange of information in matters involving the assessment of students. To this end:

1. Course authorities are responsible for ensuring that a clear written statement of expectations is provided for each course which should include a statement of the objectives of the course: its assessment plan, including weights allocated to each significant assessable component and related submission dates; the kind of evidence required for consideration to be given to late submissions; attendance, timetable and other requirements, to be presented at the first class of each session/term, recognising always the ability to negotiate changes with the students concerned within the first week.

2. All items of assessment completed during session should be marked promptly and returned to students with a mark or grade and, where appropriate, comments. Course authorities where appropriate should provide information on the distribution of results in all items of assessment so that students can gauge their own performance against that of the other members of the class.

3. Final composite marks in courses as determined by Faculty Assessment Review Groups should continue to be provided to students.

4. Final examination scripts (other than those returned to students) are to be retained in the School for six months. Students should have access to their own scripts and be able to consult the examiner or the course authority on their performance. Faculties and Boards of Studies may determine the conditions under which access may be granted.

5. Where examination question papers or other forms of assessment need to be kept confidential (e.g. multiple choice question papers where questions are reused in later examinations) arrangements should be made for students to receive advice on their performance with reference to their own examination script but in a way which does not prejudice the examination mode.

6. In the case of the examination of theses and project reports, the examiners' report should be released to the student, following determination of the student's results. The names of examiners, while remaining undisclosed prior to assessment, should be released subsequently unless a particular examiner requests that this information be not released.

Information about how to make a Freedom of Information application and the charges involved may be obtained from UNSW Student Central (Student Enquiries), the UNSW Freedom of Information Officer (+61 2) 9385 2860 or the web at: www.infonet.unsw.edu.au/admin/pmu/foi.htm

Assessment Policy

This is an excerpt from the UNSW Assessment Policy. The full policy can be found online at: <https://my.unsw.edu.au/student/academiclife/assessment/AssessmentPolicyIndex.html>

1. Introduction

1.1 Principles underlying assessment

The University's teaching programs are designed to provide a rich diversity of formal and informal learning opportunities for students. University students learn for many reasons: to acquire knowledge for its own sake; to prepare themselves for professional work and careers; and to develop discipline-specific as well as generic skills, for example, the skill to learn independently of a teacher.

A University award (as documented on a testamur) certifies that a student has demonstrated his or her understanding of what has been learned at a standard commensurate with that expected of the holder of the qualification for which the student has been enrolled. Assessment is integral to this certification procedure.

Some assessment is formative. That is, it is specifically intended to assist students to identify weaknesses in their understanding, so that they may improve their understanding and enhance their learning. Other assessment is summative; its objective is primarily to pass judgment on the quality of a student's learning, generally in terms of assigned marks and grades. Furthermore, critical reflection on the outcomes of course assessments, both formative and summative, can inform teachers and students, not only about the quality of student learning but also about the effectiveness of teaching. In the design and administration of assessments and the reporting of summative assessment results, the University has a commitment to promoting open, equitable and accountable procedures. The University is also committed to providing valid and reliable assessment information, in accord with standards in which students, potential employers and accrediting bodies can have confidence.

1.2 Assessment in relation to course development and teaching methods

While teachers can contribute profoundly to students' understanding of a discipline, students are ultimately responsible for their own learning. This responsibility extends beyond the assimilation of topics within the course. Students should ensure that they have the necessary assumed knowledge for the course, that they have an adequate grasp of academic English, that they satisfy attendance requirements, that they familiarise themselves with the course assessment requirements, and that they prepare properly for those assessments by the due dates.

For English language requirements and assumed knowledge, please refer to the 'Admission Requirements and Procedures' entry in this Handbook.

2. Timing and Weight of Assessments

Students are expected to reach the objectives of a course progressively throughout a session. They should be set tasks during the session that allow their progress to be evaluated against established criteria. Such in-session tasks should contribute to the final assessment in a course.

Assessment tasks should be designed carefully, first, to keep in proportion student time commitment and the weight of the assessment task in the overall assessment, and second, to reflect, as far as possible, the importance of each task in determining the effectiveness of students' having met the course objectives. This might mean that an important task, such as a final examination, is weighted heavily.

The Academic Board has determined that the normal workload expectations of a student are 25-30 hours per session for each unit of credit, including class contact hours, preparation and time spent on all assessable work.

Care should also be taken to avoid the imposition of a heavy imbalance of assessment load toward the second half of the session. In disciplines where comprehensive assessment is possible only when students have

completed a significant proportion of the session's work, milestone tasks should be set to enable students to build towards the submission of a more substantial assessment task closer to the end of the course. While assessment regimes will vary across the disciplines of the University, the following guidelines represent accepted norms.

2.1 Except in highly unusual circumstances, one or more tasks should be set, submitted, marked and returned to students by the mid-point of a course, or no later than the end of Week 8 of a 14-week session. This is particularly important when students are considering discontinuing a course (See 8. *Discontinuation and Effective Feedback*).

2.2 Although students need regular feedback on their progress, set assessment tasks should be kept to the minimum that is sufficient to enable students to make judgements about their progress.

2.3 Deadlines for assessment tasks should be well separated in time so as to give students periods of time for reflective learning that are free from the pressure engendered by a looming deadline.

2.4 In some disciplines, students are expected to practice skill development continuously. To evaluate students' ability to perform such on-going tasks, consideration should be given to strategies for self-assessment. In this way, students can obtain evidence concerning their level of understanding of the work, while avoiding the stress of frequent formal appraisal by an examiner.

2.5 No examination worth 20% or more of the assessment in a course should be scheduled during the final week of a standard session, and no assessment tasks should be set in the period between the end of session and start of the formal examination period. Study for these tasks inevitably impacts on other work undertaken during this period, including the preparation for formal examinations.

2.6 Students should not normally be required to sit 3 exams in 2 consecutive days.

2.7 Apart from examination scripts, all assessed work should be returned to the student, preferably in a class context where the student has the right to query the assessment for resolution either then or at a later time. Examination scripts may be returned at the discretion of the course authority.

2.8 Course handouts should advise students at the beginning of session how all assessment results are to be combined to produce an overall mark for the course. In particular, the handout should make expressly clear:

- the weight of each task in contributing to the overall mark;
- the formulas or rules used to determine the overall mark;
- minimum standards that are applied to specific assessment tasks, and the consequences if such standards are not met (including failure to submit particular tasks);
- rules regarding penalties applied to late submissions; and
- precise details of what is expected in terms of presentation of work for assessment. Emphasis should be placed on appropriate referencing conventions and requirements, on the degree of cooperation permitted between students, and on what constitutes plagiarism and the consequences of committing it.

3. Assessing Students' Progress

The University is committed to evaluating students' progress towards the completion of their degree requirements and in relation to the objectives of each course in a way that is meaningful to graduates and to employers. Thus, the University implements several procedures for the preparation for and fair conduct of examinations, and also strategies for the finalisation and communication of assessment results to ensure that there is consistent interpretation of progress indicators across the institution.

3.1 Conduct of examinations and of other forms of assessment

Examinations are conducted by the Examinations Section and by schools. It is important that all examinations are conducted under the same conditions and that those conditions are strictly adhered to. Schools should consult the Guidelines for the conduct of examinations, which are located at: <https://my.unsw.edu.au/student/academiclife/assessment/examinations/examinationrules.html>

Assessment should be anonymous where this is consistent with the learning outcomes of the course. Schools should develop and inform students of their policy in regard to anonymous assessment. The policy should indicate conditions under which anonymous assessment will normally be applied. In anonymous assessment, the student's ID number only should appear on the work submitted for marking. The number is subsequently paired with the name of the student when the mark is recorded. In other cases, for example class presentations, individual viva voce assessment and small size classes, anonymous marking will not be possible.

Students with disabilities, in certain circumstances, may be eligible for alternative provisions for assessments or examinations. Provisions for school or faculty-based assessments should be arranged with the relevant academic staff member or school administrative officer, in conjunction with the Equity Officer, Disability. Provisions for the end of session examinations should be arranged with the Equity Officer, Disability, who will liaise with the Examinations Section. Information on equity issues at UNSW is located at www.equity.unsw.edu.au

Course authorities should ensure that course convenors follow the guidelines issued by the Registrar for the 'Preparation and Printing of Examination Papers'. Course convenors are responsible for the accuracy of the examination papers in the courses for which they have authority.

3.1.1 Scheduling assessment and examinations

The University recognises that there are students whose religious faith prohibits them from sitting for examinations or attempting assessment during certain periods or on particular holy days. The University tries, wherever possible, to accommodate students so that they may fulfil both their religious and University obligations. Course convenors and other academic staff are requested to observe this policy and where possible to consult with students so that alternative arrangements may be discussed.

3.1.2 Group-based assessment

Wherever students' grades derive from an assignment that has been completed in a group, the students should know from the outset how the marks are to be determined. In particular, students should be informed if individual or group-based grades are to be awarded. As in all assessment tasks, the students should be told the criteria against which the group's assignment or presentation will be evaluated. It is also recommended that students be asked to complete self and peer evaluations of contributions to the group's final product, and that students be provided with a handout that informs them about this when the group-based assignment is given to them.

3.1.3 Viva voce assessments

Wherever students are required to complete an oral assessment task, more than one examiner should normally be present. Each examiner must record, independently, their comments and recommended mark. Any assessment task that involves some kind of performance (for example, dance or musical recital) should, in addition, be video or audiotape recorded. Clinical assessments are excluded from these requirements.

3.1.4 Class participation

The criteria to be used for evaluating class participation marks should be set out in the course handout that is distributed at the beginning of the course. Wherever possible, students should be informed of their result before the end of the session, and provided with the opportunity to discuss their result with the lecturer involved, should they wish to do so. The assigning of marks for class participation should not unfairly disadvantage any group of students, and the proportion of marks assigned to class participation should take the following issues into account:

- The method of delivery of the course (a course taught in concentrated mode would be expected to have a different class participation format from a course taught across 14 weeks).
- The contribution required by the students.

3.1.5 Undergraduate material in postgraduate coursework courses

Where undergraduate material is included in a postgraduate coursework course there must be a clear statement in the course handout on the manner in which it will be taught and assessed and how this will differ from the delivery and assessment in the corresponding undergraduate course(s).

3.2 Finalisation of results of assessment

At the end of each assessment period, each course authority must provide the Registrar with a single result for each student enrolled in the course for which he or she is responsible. The final result in most courses is expected to take the form of an integer mark, ranging from 0 to 100 (inclusive). A symbol may be used along with the mark, but only in cases where the grade is not determined from the mark itself can a symbol be used instead of a mark.

Except where program-specific rules for weighting have been approved, the Registrar then determines for each undergraduate and postgraduate student a weighted average mark (or WAM) that quantifies a student's overall performance throughout his or her program of study. The WAM is calculated first, by weighting each result by the units of credit associated with the course, and second, by dividing the weighted sum by the total number of units of credit.

3.2.1 Stages in the finalisation of results

There are two stages in the finalisation of the results that are provided to the Registrar.

In the first stage, course authorities are expected to calculate for each student enrolled in each course for which they are responsible a composite mark. It is appropriate that composite marks be calculated only when, on the basis of the work completed, a reasonable assessment can be made of the student's standard of knowledge and understanding of, and skills in, the course. The recommended mark should normally fall between 0 and 100. The minimum pass is recorded as 50 and marks above 50 reflect the level of performance, according to the categories identified in sub-section 3.2.2 below. If necessary, the provisional composite marks should be scaled so as to achieve this objective. It is expected that only minor adjustments should be required to establish suitable standards. Excessive scaling would normally indicate that the level of assessment tasks or marking standards has been set inappropriately.

The course authority is then required to submit a provisional composite mark to the Faculty Assessment Review Group (FARG), or, in cases where it is inappropriate to calculate a provisional composite mark, a recommendation about any action that is to be taken.

The full range of marks and symbols used by UNSW is set out below. Some symbols represent decisions that can be made only by the FARG. Course authorities should not include these on their return of results. Course authorities may, however, use some symbols to convey to the FARG their recommendation as to further action to be taken with respect to a student's result. These are WD, WC, UF (with a composite mark), AF, EC, and RD.

Course authorities may, in the time between the assessment and the meeting of the FARG, require students to present themselves for further assessment. Any subsequent alteration in marks should be advised by the course authority at the meeting of the FARG.

In the second stage, the FARG considers the provisional marks and recommendations and decides the final marks or any recommended further actions.

Faculty Assessment Review Groups may invite course authorities who are not members of the relevant Faculty Board to attend assessment meetings at which composite marks for courses within their responsibility are considered. If the course authorities or their nominees are unable to attend any meeting of the FARG, notes on the student cases to be considered should be provided for the presiding member prior to the meeting. If the course authorities or their nominees do not attend, the committee shall have full authority to make decisions on the standing of those courses for which the course authorities are responsible. Provided that the general statements in this document are not contravened, additional procedures and guidelines for the FARG may be laid down by its Faculty Board. If, when the composite marks for the course are being finalised, course authorities and/or Faculty Assessment Review Groups propose to vary the marks returned by the course convenor, they should advise the convenor on the action taken and the reasons.

3.2.2 Graded passes

When a composite mark falls in the range 50-100, the grade is determined in accordance with the following categories:

85-100	High Distinction	HD	Outstanding performance
75-84	Distinction	DN	Superior performance
65-74	Credit	CR	Good performance
50-64	Pass	PS	Acceptable performance

3.2.3 Unsatisfactory failure

The symbol UF (Unsatisfactory Fail) may also be used with a composite mark in the range 40-100 where a student has not performed satisfactorily in an essential item of assessment. UF should not be used to indicate that a student has failed to reach an acceptable standard in a major assessment task such as a final examination unless it is an essential item of assessment. Normally, the assessment weights or formulas should be adjusted so that failure in a major piece of assessment is reflected in an overall mark less than 50. UF should also not be used by a Faculty Assessment Review Group to circumvent the award of a conceded pass.

3.2.4 Ungraded pass/fail

Where graded passes are not awarded in a course, the grade SY (Satisfactory) is used to indicate that the student has attained the required standard of knowledge and understanding of, and skills in, the course. The grade FL (Fail) should be used to indicate that the student's performance is below the minimum level of competence in the course.

3.2.5 Grade only

In special circumstances, when it is inappropriate to return a composite mark, the grades HD (High Distinction), DN (Distinction), CR (Credit), PS (Pass) and FL (Fail) may be used. Course authorities should be aware that a notional mark is generally assigned to the grade in computing weighted averages (or WAMs). The notional mark used is High Distinction 90, Distinction 80, Credit 70, Pass 55 and Fail 25.

3.2.6 Composite marks below 50

Where the composite mark falls below 50, the Faculty Assessment Review Group will determine which of the following grades applies.

3.2.7 Pass Conceded

A Pass Conceded (PC) may be granted by a Faculty Assessment Review Group, provided a student's overall performance is considered to warrant such a concession. A Pass Conceded allows a student to progress to another course for which the former course is a prerequisite. A PC should not be submitted by course authorities.

In deciding whether a student is eligible for the award of a PC (Pass Conceded), Faculty Assessment Review Groups apply a standard concession algorithm. An undergraduate student will be considered for the award of a Pass Conceded on a mark returned by the course authority that falls between 46 and 49 inclusive, provided that any of the following conditions is met:

- the mark is 48 or 49 and the student's term WAM is at least 53;
- the mark is 46 or 47 and the student's term WAM is at least 55;
- the student's cumulative WAM prior to the start of the current session is at least 55; or
- the student is a potential graduand with no failures in the current term (see also 3.2.22).

However, a returned grade of UF cannot be converted into PC without reference to the course authority; and a student who has previously been awarded PCs for courses totalling 18 units of credit or more shall not normally be awarded further PCs.

Whenever a Faculty Assessment Review Group decides not to award a PC in accordance with the standard concession algorithm, that decision should be able to be justified.

3.2.8 Failure

If a student has made *no attempt at any assessment task*, the result should be returned as AF (Absent Fail). An AF should not be returned simply because the student did not attend a final examination or complete some other single piece of assessment. In the absence of any of the conditions above, a mark should be returned.

3.2.9 Withheld results

To indicate the withholding of a student's result, one of two symbols, a WD or a WC, is used, depending on the reasons for not finalising the result. In each case, a mark is returned.

WD: This symbol should be used to indicate that it is not yet possible or desirable to finalise a composite mark based on the work completed, or that the mark is not to be released until the student consults the course authority. WD is not appropriate when students have completed all assessment tasks but marking is not complete. In this case, LE (late entry) should be returned.

WC: This symbol refers to results that are withheld for special circumstances, or where further assessment is recommended for a student who through illness or some other acceptable misadventure has been prevented from taking one or more of the assessments or has been disadvantaged during the assessment.

Further assessment should not be granted when the composite mark, whether more or less than 50, accurately reflects the student's level of achievement in the course.

Withheld results cause significant inconvenience. They should, therefore, be used sparingly.

3.2.10 Finalising withheld results

Each school should designate a specified period, as close as possible to the date on which results are released, during which supplementary assessment will be held, and inform the students of this in the course handout at the beginning of the session. Students should be advised that they are required to be available for supplementary assessment, if required.

Students whose results have been withheld (indicated by a WD or a WC) are advised by the Registrar to contact the course authority within the specified time that has been communicated in the course handout, but in

any case no more than 5 days after the release of the results on the web, because it might be necessary to arrange for further assessment.

The deadlines for finalising withheld results are:

Session 1: the first Friday in August

Session 2: the second Friday in February

Summer Session: the third Friday in February

Winter Session: the third Friday in August.

If a student fails to contact the course authority within the specified time, a failure in the course may be recorded. All results not finalised by the relevant date will be converted to:

- a mark and grade based on the mark held in the examinations module, or to
- a grade of NC, which signifies that assessment in the course was not completed.

3.2.11 Other symbols

LE Late entry (or assessment not finalised) indicates that a result was not submitted on time by the course authority. It is the responsibility of the course authority to provide a composite mark at the meeting of the Faculty Assessment Review Group.

EC Enrolment continuing indicates that the course is taken over more than one academic session and the assessment will be finalised in a later session.

RD Result Deferred is used for project courses to indicate that the student is unable to complete in the current session. The student must re-enrol to obtain a result.

GP The mark falls in the range 46 to 49, and a decision whether or not to award a PC is pending. This is used to indicate to a Faculty Assessment Review Group that withheld results currently prevent the determination of a PC recommendation. All late results in the range 46 to 49 returned by a course authority should be entered as GP unless UF applies. Regularly, the UNSW concession algorithm is administratively applied to GP grades that are to be converted to PC or to FL, if all other results are finalised.

NF The student has been permitted, because of special circumstances, to withdraw from the course without failure. No result is recorded on the official transcript.

NC This symbol is used when a result has been withheld for an extended period of time, and there is no prospect of its being resolved.

3.2.12 Distribution of marks

The two principal approaches to the award of grades are referred to as the standards-referencing approach (in which students' achievements are evaluated against some pre-determined criteria) and the norm-referencing approach (that assesses students in comparison with their peers or relevant cohort). Over a period of years, the distribution of marks in large classes has shown a consistency across all courses. Patterns of distribution for the current session and for previous sessions are available from the Registrar. In small classes, and in courses and programs with high entrance qualifications, an increased percentage of higher marks may occur. A similar shift in the distribution of marks typically occurs in later years of most degree programs. Course authorities and course convenors are advised not to pass or fail any given percentage of students, but should be prepared to give reasons for a distribution pattern that differs from that which is consistently found in the particular course.

For more information, please refer to the 'Guide to UNSW Grades', expressing grade distributions in international terms: <https://my.unsw.edu.au/student/academiclife/assessment/GuideToUNSWGrades.html>

3.2.13 Time for marking

Assessment of students' work is a normal component of the duties of academic staff. The Head of School is expected to ensure that markers are not overloaded. While workload estimates vary across disciplines, one rule of thumb relates the amount of time spent by a marker to that spent by the student on the assessment task. For the grading of examination scripts, some schools use a ratio of roughly one-sixth to one-twelfth, depending on the complexity of the task and the level of objectivity used in determining a fair mark. For example, in a seven-hour day an experienced marker might be expected to assess between 14 and 28 entire three-hour examination scripts. In practice, marking may be distributed among several markers, each of whom assesses the corresponding part of each examination paper.

3.2.14 Submission of results

The Registrar is responsible for the provision of the means by which provisional results for each student in a course can be recorded

centrally. Such means might include the transfer of marks and grades in electronic form from systems maintained by the course authority. Course authorities must ensure that their systems conform fully to the Registrar's specifications, that student lists are current at the time of submission, and that procedures are followed to check provisional results for accuracy prior to submission. Course authorities may elect to enter the results online. Care must be taken to ensure that any transcription that is required is checked manually.

Where the results of assessment are displayed, this should be done in a way that no student can identify another student's results. This means that student IDs cannot be used because privacy of these cannot be assumed.

3.2.15 Students not formally enrolled in a course

If a student is not identified on a list of those formally enrolled in a course that is provided by the Registrar, normal electronic submission or online entry of a provisional result for the student in the course is not possible. Instead, the provisional result is to be forwarded to the Registrar using a form provided for the purpose (the form may be on paper or other medium at the Registrar's discretion). Students will be enrolled in the course on a non-award basis and will be liable for the applicable tuition fee. The course may then be counted towards the student's program at the discretion of the Registrar.

3.2.16 Confidentiality

Assessment is a confidential matter. No person involved in the process shall divulge to any unauthorised person any information about composite marks or standards in any course.

3.2.17 Student access to examination scripts

Examination scripts (other than those returned to students) are to be retained in the school for six months. Students should have access to their own scripts and be able to consult the examiner or the course authority on their performance. Faculties may determine the conditions under which access may be granted.

Where examination question papers or other forms of assessment need to be kept confidential (e.g. multiple choice question papers where questions are reused in later examinations) arrangements should be made for students to receive advice on their performance, with reference to their examination script, but in a way which does not prejudice the examination mode.

3.2.18 Release of results

Final composite marks are released to students on the web and at the Registrar's discretion may be released in other formats.

3.2.19 Retention of assessment information

Course convenors must ensure that a breakdown of the individual components that have contributed to the final mark is available at all times. Teaching staff who take leave or terminate their employment with the university should lodge those records with the course authority who will retain them for five years. An electronic record is sufficient.

3.2.20 Casual teaching staff

Where one or more non-UNSW staff are employed to teach in a course, the course authority must nominate a course convenor who is a member of staff to be responsible for ensuring that the UNSW Policy on assessment is followed. Areas of particular concern include the late return of results, failure to lodge with the School a breakdown of marks in addition to the final mark, non-return of assignments, unavailability to give feedback during the session or to discuss the final mark after the release of the results, and the inability of the School to arrange for cross-marking of assignments marked by an external examiner because of the lack of relevant expertise within the School.

3.2.21 Review of results

Students who believe that there has been an error in the calculation of their final mark may apply for a review of their result. The review may take the form of:

- either an administrative check that all marks have been included in the final composite mark; or
- an academic re-assessment of a piece of work.

Where a case is made for re-assessment, the work should be re-marked by an appropriately qualified member of staff who was not involved in the initial marking of that piece of assessment and should be done on a clean copy of the work. Please contact UNSW Student Central for further information.

3.2.22 Additional assessment for potential graduands

The status of students who have completed all the requirements for the degree in which they are enrolled, except for a potential failure in one

course, will be reviewed by the Faculty Assessment Review Group. Further assessment may be granted, notwithstanding a student's failure to otherwise qualify for such concession (see also 3.2.7).

3.2.23 Supplementary assessment

Additional or supplementary assessment should be granted only when warranted by the circumstances. Final supplementary examinations should not be granted if a student's performance in previous assessment has been of a standard that he or she would be unlikely to pass the course. Consideration should be given to the severity of the impact of any special circumstances on the student before allowing additional assessment. (See also Section 6 concerning Special Consideration.)

3.2.24 Discontinuation of courses

Faculty Assessment Review Groups may, in special circumstances, give approval for students to discontinue a course or courses without failure.

3.2.25 Degrees with Merit/Distinction

Some undergraduate Pass degrees may be awarded with Distinction when a Distinction level of performance based on a Weighted Average Mark (WAM) of at least 75% has been achieved in all courses completed since enrolment at UNSW which are credited to the relevant award. This applies only to undergraduate Pass degrees where an award with Honours is not available, for example the three year BCom where a student would have to complete a fourth year to be eligible for the BCom with Honours.

Proposals that Pass degrees be awarded with Distinction must be made through Faculty committees for approval by the Academic Board. For details see www.studentadmin.unsw.edu.au/academiclife/pass_with_distinction.shtml

3.2.26 Award of Honours

Program authorities who are responsible for programs that lead to a Bachelor's degree make recommendations concerning graduation with Honours for determination by the Faculty Assessment Review Group. The recommendations should be made by completing the appropriate form that is then distributed to the members of the Faculty Assessment Review Group before the meeting, in accordance with conditions for the award of Honours that are determined by the Faculty Board.

3.2.27 Award of the University Medal

The award of the University Medal is determined twice a year by the University Medal Committee following the Session 1 and Session 2 series of Faculty Assessment Review Group meetings. The membership of the University Medal Committee is the Vice-Chancellor or nominee (Chair), the President of the Academic Board, a Deputy President of the Academic Board, and the Registrar or nominee.

Recommendations for the award of a University Medal are forwarded directly from the Faculty Assessment Review Groups for the approval of the University Medal Committee as the final authority for the awarding of the University Medal. The award of a University Medal indicates that, taking the whole of the academic record into account, a student in an undergraduate program has shown highly distinguished merit and, where Honours are awarded, has performed at a level significantly above the minimum required for Honours Class 1. If there are specialisations within a program that involve sufficiently distinct areas of study, a Medal may be awarded for each such specialisation. Given that the award of a Medal indicates outstanding academic performance, it is expected that only in exceptional circumstances would there be more than one recommendation for a Medal for a particular specialisation. If the Medal Committee is of a mind not to award a Medal that has been recommended by a Faculty Assessment Review Group, it will discuss the matter with the appropriate presiding member and head of school, before making a final decision.

3.3 Academic Standing

Please refer to the entry 'Academic Standing' in this Handbook.

4. Special Consideration

Please refer to the entry 'Special Consideration' in this Handbook.

5. Ethical Use of Scholarly Materials

UNSW policies and procedures in this area are currently being reviewed and expanded to ensure the highest standard of ethical use of scholarly material.

The University is committed to assisting students to understand the conventions which govern academic communication and thereby to avoid action which may result in academic misconduct. The following statement on the ethical use of scholarly materials by students writing

theses, essays and assignments should be brought to the attention of all students.

The University seeks to enable students to acquire theoretical and practical knowledge that is both trustworthy and verifiable. The writing of research-based theses, essays and assignments is one way in which students approach this goal. These writings, in part, report on the creation of new insights and knowledge. In short, they represent scholarly work.

To maintain standards in scholarship requires a commitment to scholarly values. Among such values is the adherence to ethical behaviour. Many aspects of ethical behaviour come together in the process of research and, in particular, in the use of scholarly materials. In the interests of maintaining high standards in scholarship and research, the University reminds students that when they are writing essays, theses, and assignments, they are ethically bound:

5.1 to cite the published (including, where relevant, the electronically published) source, to acknowledge the originator of substantial ideas upon which they are building their work, and to acknowledge quotations by the use of quotation marks;

5.2 to refer to or use unpublished scholarly materials only with the consent of their originator, and to acknowledge the source of the materials if that consent is given;

5.3 to refrain from plagiarism with its multiple facets as defined in the Student Guide and in the section 'Academic Misconduct and Student Misconduct' earlier in this Handbook.

5.4 to ensure that their use of scholarly materials does not result in obstructing access by others, in particular, where such materials are held within the University by a library or research centre;

5.5 to represent faithfully the views of authors cited and not to misrepresent authors' views either by partial or censored quotation, or by quotation out of context, or by misleading commentary;

5.6 to seek access only to scholarly materials to which they know they are entitled or authorised, and not to attempt to access such material to which they know they are not entitled or authorised (for example, by computer hacking);

5.7 to respect the rights of other authors and to refrain from tampering with digital records (whether in text, image, sound, or other format) over which the originator has copyright and/or has asserted the moral rights of ownership; and

5.8 to refrain from manipulating digital records (whether in text, image, sound, or other format), whether in their original context or in a different context, so as to mislead their audience.

Academic misconduct falls into three main categories:

- misconduct concerning examinations;
- misconduct through misrepresentation such as falsifying documentation, and
- misconduct concerning academic works.

While the University has extensive information on the myUNSW on all aspects of academic misconduct, course convenors have a particular responsibility to inform students in the course handout what is expected of them in terms of appropriate referencing conventions and what may constitute legitimate collaboration within the assessment goals of the course.

Information on plagiarism should emphasise that it is the action of taking and using as one's own the thoughts or writings of another without acknowledgement including:

- where paragraphs, sentences, a single sentence or significant part of a sentence which are copied directly, are not enclosed in quotation marks and appropriately footnoted;
- where direct quotations are not used, but ideas or arguments are paraphrased or summarised, and the source of the material is not acknowledged either by footnoting or other reference within the text of the paper; and
- where an idea, which appears elsewhere in print, film or electronic medium, is used or developed without reference being made to the author or the source of the idea.

The consequences of academic misconduct range from a reduction in marks, failure in the course and/or exclusion from the University for a period from one session to permanent exclusion. The resolution of the University Council which sets down how allegations of student misconduct, including academic misconduct, are to be resolved is at: www.infonet.unsw.edu.au/poldoc/stumis.htm

See *Academic Misconduct and Student Misconduct* in this Handbook for a complete statement on academic misconduct.

6. Appeals Against Decisions Affecting Standing or Ability to Progress

Any student may complain about an academic decision that affects him or her if there are grounds for believing that the decision may have been made on inappropriate criteria. An academic decision includes any decision made by a member of the University staff that affects a student's standing or ability to progress in a program. Many of these decisions affect assessment but they may relate to other matters that could adversely affect a student's standing, such as the granting of advanced standing, discontinuation, the award of scholarships and prizes and decisions regarding fee liability.

Students can lodge an appeal or a grievance without fear of victimisation.

A complaint should be made initially at a local level to enable the concerns to be addressed in an informal way. If this does not provide a satisfactory outcome, the student may take the complaint to the Registrar who will undertake an investigation to ensure that appropriate procedures exist and have been followed. The final level of appeal is to the Presiding Member of the relevant committee of the Academic Board depending on whether the student is undertaking an undergraduate or postgraduate coursework program or a candidate for a research degree.

Students should lodge an appeal or make a grievance known within a reasonable time frame, usually within a month of the decision being communicated. The University has an obligation to resolve appeals and grievances expeditiously.

Separate appeal procedures exist under the Managing Student Progress policy and the Student Misconduct policy. The full policy is located at: <https://my.unsw.edu.au/student/atoz/Grievance.html> In this Handbook, refer to section 'Guidelines and Procedures for the Resolution of Academic Grievances and Disputes'.

7. Rights and Responsibilities

In order that assessment policy might be implemented effectively, formal responsibility for specific aspects of policy and practice is distributed across the University (through the Vice-Chancellor and the Academic Board), the faculties, the schools, course convenors and individual academic staff. Though some responsibilities for assessment are shared, others are specific to a particular domain. Students have their part to play in the assessment process; they have rights that correlate with the University's responsibilities. Students also have responsibilities to ensure that they are aware of, and comply with, the assessment requirements that apply to them, and to report any anomalies or problems.

7.1 Responsibilities of the University

The University, through the Vice-Chancellor and the Academic Board, has a responsibility to ensure that:

- assessment practices are explicit, fair and consistent across the institution;
- assessment procedures are monitored at the level of schools and faculties so that they meet the criteria set out in this document;
- resources are available to provide staff with access to information and expertise on the theory and practice of assessment;
- policies regarding special consideration following sickness or other misadventure, and for students with disabilities, are explicit and consistently applied;
- policies on plagiarism and cheating, including penalties for breaches, are explicit and consistently applied; and that
- appropriate appeal processes are available and publicised.

7.2 Rights and responsibilities of students

Students have a right to:

- be treated fairly and consistently in all aspects of assessment policy and practice;
- be informed of all aspects of assessment policies and practices in each course, including the criteria to be met and penalties for breaches, and in a format appropriate to students with a disability;
- the timely return of the results of assessments with appropriate and effective feedback;
- information which allows them to calibrate their own performance against the criteria for each course and the performance of other students;
- review their examination scripts and other forms of summative assessment (except those saved for reuse in subsequent testing) for the duration of the script retention period;

- have access to their student file; and to
- be informed of appeal processes, and time limits, and appeal against academic decisions made on the basis of flawed processes.

Students have a responsibility to:

- ensure that they are properly enrolled, otherwise they may be refused assessment;
- behave ethically and appropriately, avoiding any action or behaviour which would unfairly disadvantage or advantage either themselves or another student;
- be aware that a major objective of assessment is the promotion of learning rather than the achievement of grades;
- use assessments to help them develop strategies for self-assessment;
- be aware of the rules of progression and the requirements for the award of the degree, diploma or certificate;
- inform themselves about assessment policies and practices, including the University policies about academic honesty, legitimate cooperation, plagiarism and cheating, and the timely submission of work;
- be aware of the means for seeking assistance and advice on assessment within the school and the University;
- ensure that they understand the requirements for examinations and other assessment tasks;
- ensure that submitted assessment tasks are their own work except when they acknowledge shared ownership of a group project;
- notify staff as early as possible if difficulties arise with the timing or other requirements of assessment tasks;
- advise schools or faculties as appropriate of any substantial absence and be aware of the appropriate use of medical and other certificates in applications for special consideration;
- ensure that they understand the advantages and possible adverse implications of discontinuation or withdrawal;
- seek the advice of the course authority if they believe the proposed assessment method for a particular unit to be unfair;
- comply with requirements in relation to attendance, completion of work, and utilisation of support facilities. It is important to note that if students attend less than 80 percent of their possible classes, they may be refused final assessment;
- seek feedback on the assessment of their work and advice on how to remedy weaknesses in learning skills and examination technique if necessary;
- seek early resolution, through the Head of School or nominee, over any problem in their working relationship with a staff member;
- inform themselves of appropriate appeal processes; and to
- inform the EO Disability and/or the school/faculty in a timely manner if they require alternative examination or assessment arrangements.

8. Discontinuation and Effective Feedback

The discontinuation without failure date for students withdrawing from courses is half the session plus one week. The discontinuation without failure date for whole year courses is the Session 2 census date. Students are financially liable for all courses in which they are enrolled as at the relevant census date.

Students who are thinking of discontinuing should be provided with effective feedback by the end of week 8. This may take one of the following forms:

1. an assessment task to be completed by the end of week 7 and marked and available for collection by week 8;
2. an online test to be available through the mycourse@unsw.edu.au link. This may be a self-assessment task or an assessment task marked by the relevant school. This test should be listed in the course handout as a study mechanism and have directions for the students wishing to access it; or
3. a formal meeting with the lecturer or tutor.

Effective feedback should correspond to the purpose for which it is intended, which might include advice on whether the student should continue in the course. However, some students might discontinue for reasons unrelated to effective feedback.

Fees for Goods and Services Incidental to Studies

Under the provisions of the Higher Education Support Act 2003 (HESA), Commonwealth supported students and local fee-paying students

can usually complete the requirements of their program without the imposition of fees that are additional to student contribution amounts or tuition fees.

Generally, where materials or services are a required part of a program, the University (described in the Act as a provider) cannot levy fees unless the material or service, or an alternative, is also available free to students.

For example, course materials such as course outlines must be free to students and access to computers or other online resources must be available to students at no additional charge. For full details see 'Circumstances in which providers must not levy fees' below.

Students can be charged certain fees, including incidental fees, where the material or service is not essential to the students' program of study or, the material or service is an alternate form of a material or service provided free of charge.

For example, charges can be levied for lecture notes or audio tapes of a lecture that is available free to students and charges can be levied for internet and computer access to material outside course/program requirements and also for graduation ceremonies. For full details see 'Circumstances in which providers may levy fees' below.

Students can also be charged fines or penalties, provided that the charge is levied principally as a disincentive and not in order to raise revenue or cover administrative costs.

Circumstances in which providers may levy fees

In accordance with chapter 12 of the Commonwealth Grant Scheme Guidelines, a provider may charge a student for a good or service related to the provision of their course if one of the following criteria applies:

1. The fee is for a good or service that is not essential to the course of study.

For example:

- access to internet and computer facilities (except where these are required as part of a course);
- printing of notes from the internet or disks; and
- graduation ceremonies in cases where students are not required to attend the ceremony in order to obtain their award.

2. The fee is for an alternative form or alternative forms of access to a good or service that is an essential component of a course but is otherwise made readily available at no additional charge by the provider.

For example:

- lecture notes or tapes, provided that lectures are available to students free of charge;
- electronic provision of essential information if the information is also readily available free of charge in another form (eg. in the university library); and
- reading material, such as anthologies of required readings, provided that these texts are also available free of charge.

3. The fee is for an essential good or service that the student has the choice of acquiring from a supplier other than the provider and is for:

- equipment or items that become the physical property of the student and that are not consumed during the course of study; or
For example: artwork; fabric for sewing class; first aid courses; police clearance checks; musical instruments; protective clothing or footwear; stethoscopes; dance shoes; and reference texts.
- food, transport and accommodation costs associated with the provision of field trips.

4. The fee is a fine or penalty, provided that the charge is levied principally as a disincentive and not in order to raise revenue or cover administrative costs.

For example:

- fines or penalties for late enrolments, late variations to enrolments, late withdrawals from a course, and late payment of charges, student contribution amounts and tuition fees;
- review of grade if a student has already passed the course but is seeking to improve their grade; and
- a charge for an assessment of prior learning in circumstances where a person has not applied for entry to the institution.

Circumstances in which providers must not levy fees

Providers must not charge students for a good or service which is required for a course of study unless that good or service, or an alternative to it, is also available to students at no additional charge.

For example:

- course materials, such as: subject outlines; - reading lists; - tutorial or seminar topics and problems; - assignment and essay questions; and- requirements and guidelines for the presentation of work;
- access to library books, periodicals and manuals;
- clinic, laboratory or workshop materials such as anaesthetics, chemicals, filters, fuel, fertilisers, animal feed or crops used in practical sessions or research;
- access to computers or other online resources;
- recognition of prior learning if the student is enrolled with the provider or the student is applying for enrolment (including auditions);
- equipment and manuals which a professional in the field would not be required to own, such as: - fixtures in a clinic, laboratory or workshop; or - large items of equipment and relevant workshop manuals required for their use;
- admissions services;
- examinations or assessments, including practical assessment, for example, which requires the services of musical accompanists;
- reassessment of results where a student has failed an assessment and thereby failed a subject or unit; and
- mailing charges associated with distance education.

Copyright

Copyright is the intellectual property of authors, composers, photographers or artists which gives them the exclusive right to copy, publish, perform, broadcast or to make an adaptation of their work. Copyright in an original work is automatic and subsists as soon as the work is created. Under Australian law a copyright work is protected whether or not the work has been marked with the copyright symbol ©. Works published in any form, whether on the Internet, in hard copy or in any other medium, are protected by copyright.

The University does not claim ownership of the copyright of any original work contained in a higher degree thesis or project report submitted as a requirement for the award of a degree.

Under the provisions of the *Copyright Act 1968* (as amended), students are permitted to make single copies of literary, dramatic, musical or artistic works provided they are required for research or study purposes and provided they do not comprise more than a reasonable portion of the work. As a guide, a reasonable portion is regarded as:

- not more than 10% of a literary work of not less than 10 pages, or one chapter;
- one article from a periodical or two or more articles if they relate to the same subject matter.

In certain circumstances the Act allows for one full copy of a work to be made for research or study purposes if it is not separately published or available commercially.

The University is also permitted under a special provision in the Act to make multiple copies of written works for teaching purposes, subject to a number of conditions including copying limits and payment of remuneration to copyright owners. This provision does not relate to individual students.

Students enrolled at UNSW may refer to the UNSW Copyright website at www.copyright.unsw.edu.au for further information.

Equity and Diversity

Equity and Diversity Policy Statement

The University of New South Wales is committed to the goals of equal opportunity and affirmative action in education and employment. It aims to provide a study and work environment for staff and students that fosters fairness, equity, and respect for social and cultural diversity, and that is free from unlawful discrimination, harassment and vilification as determined by legislation and by University Council¹.

In fulfilling this commitment, the University will:

- foster a University culture which values and responds to the rich diversity of its staff and students²;
- provide equal opportunity by removing barriers to participation and progression in employment and education so that all staff and students have the opportunity to fully contribute to University life³;

- offer programs which aim to overcome past disadvantage for members of staff and student equity groups³;
- promote clear and accountable educational and management policies and practices to engender trust between managers, staff and students;
- enhance the quality of students' learning through the provision of culturally, socially and gender inclusive education in areas such as curricula, teaching methods, assessment and review provisions, written and audiovisual material and support services;
- ensure that its staff and students are aware of their rights and their responsibilities as University members.

To achieve these goals, the University depends on the continued co-operation of all members of the University community.

The Vice-Chancellor as Chief Executive Officer and Director of Affirmative Action is responsible for compliance with all relevant legislation. He is assisted by the Executive and the Director, Equity and Diversity.

Explanatory Notes

1. Currently the grounds of unlawful discrimination and harassment are:

- age;
- compulsory retirement from employment;
- disability (physical, intellectual, psychiatric, sensory, neurological or learning disability, physical disfigurement, the presence in the body of an organism capable of causing disease, and current, past, future or imputed disability);
- homosexuality (male or female, actual or presumed);
- marital status (single; or, with reference to a person of the opposite sex, married, separated, divorced, widowed or in a de facto relationship);
- political affiliation, views or beliefs;
- pregnancy or potential pregnancy;
- race (including colour; descent; ethnic, ethno-religious or national origin, nationality; and immigration);
- religious affiliation, views or beliefs;
- responsibilities as a carer;
- sex; sexual harassment;
- transgender or transsexuality (anyone who lives, has lived, or wants to live as a member of the opposite gender to their birth gender including people who are assumed to be transgender);
- actual or imputed characteristics of any of the attributes listed above; and
- association with a person identified by reference to any of the attributes listed above.

It is also unlawful to terminate employment on any of the grounds listed above, and also on the grounds of temporary absence from work because of injury or illness, membership or non-membership of a union, participation in union activities, and absence from work during maternity or other parental leave.

The grounds of unlawful vilification are:

- HIV/AIDS;
- homosexuality;
- race; and
- transgender (transsexuality).

The University is complying with the following statutory requirements with regard to unlawful discrimination and vilification: *The NSW Anti-Discrimination Act*, and *The University of New South Wales Act*; and *The Federal Disability Discrimination Act*, *Racial Discrimination Act*, *Sex Discrimination Act* and *Workplace Relations Act*.

Note (i): University College at the Australian Defence Force Academy in the ACT is subject also to the *ACT Discrimination Act*. Staff working at, or visiting, University College need to be aware of the following grounds of unlawful discrimination in addition to those listed above:

- bisexuality;
- breastfeeding;
- membership or non-membership of an association or organisation of employers or employees;
- profession, trade, occupation or calling; and

- association (whether as a relative or otherwise) with a person identified by reference to one of the above attributes.

Note (ii): Under the *Federal Human Rights and Equal Opportunity Act* there are a number of further grounds of discrimination in the area of employment or occupation:

- criminal record;
- medical record;
- national extraction or social origin; and
- trade union activity.

However, discrimination on these grounds is not made unlawful by the Act, and the grounds do not apply where the discrimination is necessary because of the inherent requirements of a particular job. The only avenue of redress for a complaint under this Act is conciliation.

2. In compliance with the *NSW Charter of Principles for a Culturally Diverse Society* endorsed in 1993 and reaffirmed in 1995 by the NSW Government.

3. For staff, in compliance with Part IXA of the *NSW Anti-Discrimination Act 1977* and the *Federal Equal Opportunity for Women in the Workplace Act 1999*. The equity groups currently identified are: Aboriginal and Torres Strait Islander people; people with disabilities; people of non-English speaking background; and women.

For students, in compliance with Federal Government policy as outlined in *A Fair Chance for All*, AGPS, 1990 and subsequent amendments as outlined by DETYA. The identified equity groups are: Aboriginal and Torres Strait Islander people; people with disabilities, from socio-economically disadvantaged backgrounds, from rural and isolated areas, from non-English speaking backgrounds; and women in non-traditional areas of study.

Other Equity and Diversity Policies and Procedures

In addition to the Equity and Diversity Policy Statement, the University has a number of other policies to help make it a safe, equitable and fair environment for all students and staff. These policies include:

- Equal Opportunity in Education Policy;
- Anti-Racism Policy;
- HIV and other Blood Borne Infections Policy;
- Policies and Guidelines: Students with Disabilities;
- Code of Practice: Students with Disabilities;
- Discrimination and Harassment Grievance Procedures for Students

These can be found on the Equity and Diversity website www.equity.unsw.edu.au/policies.html or are available from the Equity and Diversity Unit, contact details as per below.

Occupational Health and Safety

UNSW's Occupational Health and Safety Policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others. This requirement is particularly pertinent for both undergraduate and postgraduate students undertaking arts and science-based projects because of the experimental and research nature of work carried out in laboratories and workshops.

OHS Guidelines

- Students should discuss the safety implications of any project or experiment that they are planning with their supervisor or demonstrator and complete risk assessments before commencing the work. Be aware of recommendations for the safe use, transport, storage, and disposal of the materials being used. Students should have access to, and read thoroughly, the Material Safety Data Sheets for any chemicals they may use and operating instructions for plant and equipment. Special requirements and training apply to students undertaking work with radioactive substances, ionising radiation apparatus, lasers or genetically manipulated organisms. Students need to read the AS/NZS 2243 series on Safety in Laboratories and comply with their requirements. Students performing high risk activities as defined by Appendix D of AS 2243.1, should not work alone. Additional requirements may apply to students working with animals, microorganisms and or human tissue particularly concerning immunisations prior to hospital placements or laboratory work.
- OHS Policy guidelines are available on the Risk Management Unit website: www.riskman.unsw.edu.au
- Students need to be aware of the OHS Policy guidelines that relate to their area of study including policies on OHS accountability, hazardous

substances, bio-safety, carcinogens gene technology, fieldwork, plant safety and radiation safety.

Students must report any hazards or incidents and any injuries or illnesses acquired during the course of their study, especially if it results in their being unable to pursue their studies for a continuous period of 7 or more days. The relevant reporting forms are available in all school offices and are accessible on the web at www.riskman.unsw.edu.au/ohs/forms.shtml

- The Occupational Health, Safety and Environment section in the Risk Management Unit organises and participates in orientation and training courses for students throughout the year via the schools. Students are encouraged to attend these sessions. Undergraduate and postgraduate student representatives are nominated for the school OHS committees and Level 1 OHS committee.
- Students working at night on campus are advised to use the Unibeat service arranged by phoning Security on 9385 6000 to accompany them safely to the car park areas. They should be familiar with the procedures to follow in the event of an emergency, and should know the location of emergency exits, fire-fighting equipment, first-aid cabinets and telephones. All emergencies are to be reported to Security on **9385 6666**. Students should also know the telephone number of their Building First Aid Officer, the University Health Service 9385 5425 and their supervisor's contact telephone number for emergency purposes. They should co-operate fully in the conduct of any building evacuation drill which is carried out in the school within which they are working and should be aware of any special instructions which might be relevant in the event of an accident involving their project. Students may only work after hours in accordance with school policy.
- All students have obligations as 'persons' under Sections 21, 24 & 25 of the *Occupational Health and Safety Act 2000* and *OHS Regulation 2001*. It is essential students read their legal obligations, which can be found at the website www.austlii.edu.au under 'Cases and Legislation: NSW', 'NSW Consolidated Acts' and 'NSW Consolidated Regulations'.

Action may be taken under the UNSW Student Misconduct Rules against students who deliberately act in an unsafe manner causing potential risk to their own or others health and safety.

Guidelines and Procedures for the Resolution of Academic Grievances and Disputes

The University of New South Wales recognises that all decisions which affect a student's standing or progress in a program or course must be made fairly and must be based on appropriate academic criteria.

Guidelines

The University is committed to providing a harmonious work and study environment, and will seriously listen to complaints and resolve them quickly if possible. The resolution procedures ensure that students are able to air legitimate complaints, knowing that ad hoc, vindictive or arbitrary action will not be taken against them or the staff complained about. By providing a clear set of procedures, it is hoped that grievances can be dealt with satisfactorily and expeditiously, and will prevent a minor grievance from becoming a major problem.

These procedures apply to all enrolled students and to any decisions which may affect a student's standing in a course or program. Many of these decisions concern assessment, but they may relate to other matters which could adversely affect a student's standing such as the granting of advanced standing, discontinuation, supervision arrangements, access to facilities, the award of scholarships and prizes, and decisions regarding fees. Research students may have a grievance concerning a thesis topic, access to facilities or supervision.

As there are many different decision-making processes in the University potentially affecting academic standing, not all of them can be covered specifically in one set of procedures. It is however the University's intention that a student's right to resolution of a grievance or dispute is not limited by this statement of procedures. Existing appeal procedures established under the Managing Student Progress policy or the Misconduct policy are not affected by these procedures. Information on these procedures is available in the University Calendar, from UNSW Student Central in the Chancellery or on the web.

A student is required to make his/her grievance known within a reasonable time frame, normally within a month of the decision being communicated.

The University expects that student grievances and claims of unfair treatment should in most instances be able to be resolved through informal discussion and consultation without recourse to formal appeal.

However, where resolution is not possible, the University is committed to listen seriously to complaints and resolve them quickly if possible, by the following procedures:

Procedures

Step 1

The student should attempt to resolve the grievance with the staff member(s) concerned within a reasonable time frame.

Step 2

If the grievance is still unresolved, it should be directed to the Head of School (or other responsible officer nominated by the Faculty) who will attempt to resolve the grievance informally. Reasons should be provided by the Head of School (or nominated officer) for any recommendation or decision in respect of the matter.

Step 3

If the matter is not satisfactorily resolved at this stage, the student should refer the grievance to the Registrar.

Except when insufficient or unfounded reasons have been given by the student to support the complaint, the Registrar will take the complaint in writing, inform the respondent officially, commence an investigation, including reference to the Dean or Presiding Member of the faculty, and give an answer (including reasons) normally within 7 days.

Step 4

If the student is still dissatisfied, an appeal may be lodged in writing with the Presiding Member of the Undergraduate Studies Committee (USC), the Postgraduate Coursework Committee (PCC) or the Committee on Research (COR) within 14 days of receiving the Registrar's notification. The Presiding Member may decline to take action in cases where insufficient or unfounded reasons have been given by the student and shall inform the student accordingly.

If the matter has not already been considered by the USC, PCC or COR, this appeal will be heard by an Appeal Sub-Committee, empanelled for the purpose by the Presiding Member of the appropriate Committee. The Presiding Member will appoint as Chair of the Appeal Sub-Committee a member of the corresponding Studies Committee.

If the matter has already been considered by the USC, PCC or COR, this appeal will be heard by an Appeal Sub-Committee of the Academic Board, empanelled for the purpose by the President of the Board. The President will appoint as Chair of the Appeal Sub-Committee a member of the Academic Board.

The Appeal Sub-Committee will consist of at least three members, one of whom will be a student. The student member will be drawn from the Academic Board or from the current list of student members of faculties.

No member of the Appeal Sub-Committee will have been associated with either the original decision or any earlier step in the appeal process.

Within two months the Appeal Sub-Committee will make a decision on the matter. Decisions made by the Appeal Sub-Committees will be reported annually to the Academic Board. There will be no further right of appeal.

Each stage is to be handled expeditiously.

Student Discrimination and Harassment Grievance Policy and Procedures

In addition to the above procedures for the resolution of student grievances and disputes, the University has a policy and procedures relating specifically to grievances on the grounds of unlawful discrimination and/or harassment. The Policy applies to all enrolled students and covers all student grievances of unlawful discrimination and harassment. A grievance may involve unlawful discrimination if it contains allegations of unfair and inequitable treatment on the basis of a person's race, ethnic and ethno-religious origin or nationality; sex or sexual preference (including transgender); marital status; status as carer; pregnancy or potential pregnancy; age; disability; religious, trade union or political affiliation. Vilification on the grounds of race, homosexuality and HIV/Aids status is also unlawful. Unlawful harassment is unwelcome and offensive or intimidating behaviour, comments or images based on any of these grounds. The most common forms of harassment are racial and sexual harassment.

A copy of the Student Discrimination and Harassment Grievance Policy and Procedures can be found on the UNSW website at www.equity.unsw.edu.au/policies.html. For further advice, please contact the Equity and Diversity Unit, telephone (02) 9385 4734, email equity-diversity@unsw.edu.au.

UNSW Student Services: Privacy Code of Practice

The privacy of your personal information is a vital part of our relationship with you as a student. We are committed to maintaining the secure custody of your personal information and strictly adhere to the *Privacy and Personal Information Protection Act 1998 (NSW)*.

The following statement outlines policy, procedures and safeguards in place to manage the personal information of students at UNSW.

Personal Information Collected

As a part of our functioning as an educational institution UNSW holds personal information regarding our students.

The nature of personal information collected and maintained about students by the University generally comprises name, date of birth, gender, contact details (including addresses, phone, fax and email), citizenship/residency status, nationality, passport numbers and visa status, as well as details of previous study and disabilities. This information is used for a range of purposes (see 'Use and Disclosure of Personal Information' below).

Some information is collected for statistical purposes for use in University planning and for mandatory government reporting. This may include information relating to ethnic origin, country of birth, languages spoken, source of financial support, and mode of transport.

When you are issued with your Student ID card your photograph will be taken and will be printed on your card for identity verification purposes. This photograph may also be provided to other University departments in electronic format for this purpose.

Records of financial transactions with the University may be maintained (including credit card numbers and banking details). Your tax file number (TFN) will be collected where necessary as required by the *Higher Education Support Act 2003* (HESA) for taxation and income related purposes. Universities are authorised to retain TFN data only for the purposes of reporting details of your HECS-HELP, OS-HELP, or FEE-HELP debt to the ATO. Special security measures are in place to protect the confidentiality of TFNs.

Other information collected may include documentation relating to medical and/or personal circumstances provided directly by you in relation to applications for consideration of these circumstances in regard to your admission, academic progression, financial liability, and in the administration of some student services such as accommodation and disability services.

Records will be maintained of your enrolment, academic progress and attendance whilst a student at UNSW. Audit trails may also be maintained of any enrolment transactions you submit through the University's web based student system, myUNSW.

Our primary means of collection of personal information is information provided by yourself. However, where you have applied for admission through an agent they may have provided information on your behalf. Obviously, some information is also generated by UNSW in the course of our activities (for example, your examination results).

Use and Disclosure of Personal Information

All information collected is necessary for the conduct of our business as an educational institution.

The information collected is used for a variety of purposes including:

- Student admission
- Enrolment and progression
- Scholarship administration
- Conduct of student elections
- Provision of student services
- Mandatory reporting to external agencies which include the Department of Education, Science and Training (DEST), Centrelink, the Australian Taxation Office (ATO), and the Department of Immigration & Multicultural & Indigenous Affairs (DIMIA).
- Archival purposes

Upon graduation some personal information regarding students gets transferred to the University's alumni database. The data is used in order to keep graduates informed of University activities and events. The information may also be passed to the UNSW Foundation for fund raising purposes. Students who would prefer that their personal information is not used for these purposes may opt out by contacting the Marketing and Development Office at the University.

We do not sell, rent or trade your personal information. Personal information is not released outside the University except in the following circumstances. It may be disclosed when required or authorised by law, such as in response to a subpoena or in the case of mandatory government reporting under relevant legislation. It may also be disclosed when you have consented to our disclosing information about you through the acceptance of the terms and conditions which form part of your application for admission or your enrolment. The Deputy Registrar or a more senior officer of the University may also disclose information in exceptional circumstances because it is considered imperative for your health and safety.

For admissions purposes, your information may be shared with other educational institutions. Where you are engaged in cross-institutional study it is also necessary that your personal information be exchanged with the other institution/s involved.

There is a very limited amount of personal information held by the University which amounts to a matter of public record. A notable example is the status of a person as a graduate of UNSW. However, the fact that a student is enrolled at the University is not treated as a matter of public record.

The University is occasionally willing to assist bona fide researchers undertaking studies, for example, by the distribution of questionnaires within the University community. These requests must obtain the approval of the Registrar and clearance by the University Ethics Committee. Name/address labels are provided under stringent conditions associated with the preservation of individual privacy. Material relating to these requests must contain a clear statement of purpose and responses must be entirely voluntary.

Your Responsibilities

As a UNSW student you have certain responsibilities in relation to the privacy and maintenance of your personal information. These responsibilities are to:

- Maintain the confidentiality of any secure passwords issued to you
- Update your contact and personal information as soon as practicable after any change
- Provide true and complete information in regards to your application and enrolment
- Provide correctly verified documentation to the institution where requested.

Control Over your Personal Information (myUNSW)

As a student, you are able to view and update much of your personal and enrolment data through myUNSW.

myUNSW enables you to:

- manage your enrolment, if you are an undergraduate or postgraduate award student
- view your personal class schedule
- check your enrolment details
- view your student financial account
- change personal details such as your mailing address and contact details
- check your assessment results and academic standing
- update some statistical information about yourself

You cannot change some personal details through myUNSW. For example, your name, date of birth or citizenship/residency, as these require documentary evidence. Such changes must be submitted, together with documentary evidence, through the Student Centre on your campus.

If you are unable to use, or do not have access to myUNSW for whatever reason, please contact the Student Centre on your campus or your program/faculty office and all reasonable efforts will be made to correct the information.

If You Fail to Meet Your Responsibilities

If you provide untrue, misleading or incomplete information to the University, it may be necessary on the basis of this for the University to refuse, reverse or terminate your enrolment or cancel or vary any decision it has made. It may also be necessary for the University to disclose the information to any person or body the University considers has a legitimate interest in receiving it.

The University cannot be held responsible for any infringement of your privacy on the basis of your failure to maintain the confidentiality of secure passwords issued to you.

Failure to maintain your personal data may have serious consequences. For example, if you are an international student in Australia on a student visa you may have your visa cancelled if you do not notify the University of a change of residential address or a change of education provider within timeframes specified as a condition of your visa.

If We Fail to Meet Our Responsibilities

We recognise that in any organisation things can go wrong. Should you have a grievance regarding privacy and believe that we have not met our responsibilities in accordance with this policy and privacy legislation, please contact us. This gives us an opportunity to fix the problem and allows us to do all we can to retain your confidence. You should address your grievance in writing to the UNSW Privacy Officer giving all relevant details. The Privacy Officer will arrange for your concerns to be investigated immediately and will write to you as soon as possible.

Security of Personal Information

We are committed to keeping secure the information you provide to us, and we will take all reasonable precautions to protect your personally identifiable information from loss, misuse, unauthorised access, alteration or disclosure. We have a range of physical and technology policies in place to provide a robust security environment. We regularly review these measures to ensure their ongoing adequacy.

Most personal data is stored on the student administration system (*NewSouth Student*). This database is protected through the use of secure passwords and other security safeguards. You can expect that access to your account will not be available to other users.

In some instances we also maintain paper based files e.g. for medical documentation, and paperwork relating to admission, scholarships, enrolment and the provision of student services. Files are kept in a secure environment. When the information is no longer required for the purposes for which it was collected, and any legal obligations in relation to retention of data for a specified period have been fulfilled, information is destroyed in accordance with established UNSW procedures for the disposal of confidential material.

Staff access to either computerised or paper-based records is granted only where there is a demonstrated need for this because of a staff member's responsibilities. Security on the student database is allocated according to a staff member's role at the University. Staff members have unique passwords assigned to them and their use is monitored and audited. A range of other IT security measures are also deployed on the University's networks.

Access to Personal Information

You can ask us to provide you with access to the personal information we hold about you. If we are able to, we will provide you with access and a fee may apply. If we cannot meet your request for access, in whole or in part, we will let you know why.

Further Information

This page is not intended to be an exhaustive statement of UNSW Student Services' obligations under the Act and should be read in conjunction with UNSW's Privacy Management Plan on the following website: www.infonet.unsw.edu.au/poldoc/privacy.htm

Government Policies

Health-related Programs

Criminal record checks:

The NSW Department of Health has a policy to carry out criminal record checks on all students undertaking clinical placements or who require access in any capacity to facilities operated by the Department. (This includes all the Teaching Hospitals used by UNSW in its Medicine program.) It undertakes these checks, as it has a duty of care to all patients and clients receiving services from the Department. The check is conducted by the NSW Police Service and is coordinated by the Department of Health and the University. Further details can be obtained from your program authority.

Infectious diseases:

Students required to complete clinical training in the NSW hospital system will be subject to various guidelines and procedures laid down for health workers by the NSW Department of Health relating to immunisation, infection and blood-borne viruses. Further details can be obtained from your program authority.

Education Programs

Criminal record checks:

It is a requirement that a check of police records be conducted for all teacher education students applying for an unsupervised internship

placement in a NSW government school. Contact your program coordinator for further details.

Working with Children

Under the Commission for Children and Young People Act 1998 and the Child Protection (Prohibited Employment) Act 1998, students who as part of their enrolment are required to work with children must declare whether they are a 'prohibited person', that is they have been convicted of a serious sex offence. It is an offence for a 'prohibited person' to work with children.

International Students (ESOS Act)

The *Education Services for Overseas Students (ESOS) Act 2000* is Commonwealth Government legislation that ensures providers of education and training are regulated in the delivery of education services to international students.

All providers and programs available to international students are required to be registered on the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS). A National Code of Practice has been established which provides for consistent standards for the registration and conduct of registered providers and the conduct of persons who deliver educational services on behalf of registered providers.

The Act also provides for obligations and restrictions on students to comply with the conditions of their student visa. Under the Act, the University is required to monitor and report on some of these conditions to the Department of Immigration, Multicultural and Indigenous Affairs (DIMIA).

The ESOS Management Unit at UNSW is responsible for coordinating the monitoring and reporting requirements under the Act and is available for advice to students on any of these requirements. For further information, please refer to the following website or contact the Unit via phone (+61 2) 9385 3065 or email esos@unsw.edu.au: <https://my.unsw.edu.au/student/resources/ESOSstudent.html>

UNSW staff should refer to the following website for information: <https://my.unsw.edu.au/student/staff/ESOSstaff.html>

Student Resources

UNSW offers a wide range of services and resources to support local and international students during their period of study. Please refer to the A-Z Guide on the following website for a full and up-to-date list: <https://my.unsw.edu.au>

The University Library

The Library offers resources and services to assist UNSW students and staff with their research and study. Many of these resources and services are available 24 hours a day via the Library homepage: www.info.library.edu.au

Situated within the Library you will find computers and printing facilities, photocopiers, books, and journals. An interlibrary loans service is available for postgraduate students and staff.

The collections within the Library are divided into disciplines, Social Sciences and Humanities (enquiries, Library Level 3), Physical Sciences (enquiries, Library Level 7), Law (enquiries, Library Level 8), Biomedical Sciences (Mathews Annex, enquiries ground floor), and Fine Arts (COFA Library, Paddington).

The Library is able to assist you with information literacy resources and programs. For students, this means classes and online tutorials demonstrating how to locate information for your assignments; see 'skills classes' on the Library homepage. For staff, this means resources and assistance that will help you integrate information literacy into your courses. Additional information is available from library staff in your discipline area.

Free IT help and training for students and staff, is located in the main Library on the Library Lawn entry level. There is drop-in assistance, classes, and online tutorials aimed at helping you develop your computer skills. See the ICT Assist web site: www.ict.unsw.edu.au

Library opening hours vary during the academic year. See 'opening hours' on the Library homepage.

Other library facilities providing services to the students and staff of particular faculties are located at: Water Research Laboratory, Manly Vale, the Australian Graduate School of Management (AGSM), Kensington and the Australian Defence Force Academy (ADFA), Canberra.

The Learning Centre

The Learning Centre provides a wide range of academic support services to students enrolled at the University. Assistance is available through workshops in academic skills, individual consultations and academic English programs. All programs are free and individual consultations are confidential. Dates and times of workshops are available at the Learning Centre and on the website.

Academic Skills Workshops assist students to adjust to academic expectations. Workshop topics include reading and note taking, essay and report writing, critical thinking, oral presentations and avoiding plagiarism.

Academic English Workshops assist students for whom English is a second language and topics include grammar, academic English vocabulary, pronunciation, listening skills and academic writing.

Students can also make an appointment with a Writing Assistant to help improve their academic writing and will be given feedback on drafts of their assignments..

The Learning Centre produces a number of handouts on topics such as academic referencing; writing an essay; writing a report; doing a seminar presentation; avoiding plagiarism and studying for exams.

The Learning Centre also has a well-stocked library with study skills and language and communication materials, dictionaries, audio and videotapes available for short-term loan.

The Learning Centre is located on Level 2, Library Tower, telephone (02) 9385 3890, website www.lc.unsw.edu.au

University Counselling Service and Compass Programs

The Counselling Service, Compass Programs, provides personal development resources, enhancement programs and confidential counselling to enrolled students of UNSW. Students are encouraged to access the Counselling Service in relation to any issue that might adversely affect their personal and academic progress. The service employs psychologists who are able to assist students with concerns such as: transition and adjustment to university life and academic expectations; support with sorting out academic or administrative issues; motivation and other difficulties which affect study; interpersonal problems or relationship conflicts; and personal concerns such as stress, anxiety, depression or loneliness. Students can access the service via the "Drop In" option (no appointment necessary) available from 11am (sign up at 10.45am) each day or make an appointment in advance.

The Counselling Service's website contains an introduction to the service and useful resources for students and staff: www.counselling.unsw.edu.au

Appointments on the Kensington campus are available between 9am and 5pm. The Counselling Service is located on the 2nd Floor, East Wing Quadrangle Building. Appointments can be made by visiting the service or telephoning (02) 9385 5418. Telephone counselling appointments and before/after hours appointments can be negotiated.

Appointments at the College of Fine Arts can be made by telephoning (02) 9385 0733 or visiting the COFA service at Ground floor, G Block, Room 06.

Careers and Employment

Careers and Employment offers the following services:

- Careers and Employment Online for job vacancies (graduate, vacation and part-time), employment related information (including sample resumes, cover letters, interview and job search tips) and information on all Careers and Employment activities;
- International Employment Program;
- Workshops including job search, career planning, resume writing, and interview skills. These can be tailored to meet specific faculty needs (see website for schedule);
- Guest Presenter Workshops in which representatives from organisations speak about graduate employment issues;
- Individual assistance for resume checking and help with career management issues;
- Career guidance programs;
- Fortnightly e-list of job vacancies;
- Careers library with resources on career development;

- Computer access for careers research;
- Careers Expo (March) where students can meet employers;
- Graduate Recruitment Programs.

Contact Careers and Employment, Level 2, East Wing, Quadrangle Building. Opening hours Monday to Friday 9am-5pm. Telephone (02) 9385 5429, fax (02) 9385 6145, email careers@unsw.edu.au, website: www.careers.unsw.edu.au

Disability Services

Students with disabilities who require any services should contact Laurie Alsop, Equity Officer (Disability), at the Equity and Diversity Unit on telephone (02) 9385 4770, email l.alsop@unsw.edu.au, location Level 9 Applied Science Building.

Services include the provision of notetakers, readers, sign-interpreters, examination provisions, assistive technology, texts in alternative formats, liaison with academic staff, an electronic mailing list, and access to the Disability Resource Centre.

Whenever possible, students requiring services should contact Laurie Alsop prior to the commencement of classes, to facilitate the organisation of those services. More information can be found at: www.equity.unsw.edu.au/disabil.html

Equity and Diversity Unit

The Equity and Diversity Unit provides services to students, staff and managers, including:

- disability services for students and staff (see above);
- support for ACCESS students;
- assistance with grievance handling under UNSW's discrimination and harassment grievance procedures;
- guest lectures and presentations to students; and
- advice and information on anti-discrimination legislation, policies and practice.

You are welcome to contact the Unit at any time to talk confidentially about any issues relating to equity and diversity in your study. The Equity and Diversity Unit is located at Level 9, Applied Science Building, telephone (02) 9385 4734, email equity-diversity@unsw.edu.au.

For further information, please refer to the Equity and Diversity Unit's website: www.equity.unsw.edu.au

IT Service Desk

The IT Service Desk is the central support point for UNSW staff and students requiring assistance with IT related matters.

The IT Service Desk provides support and technical advice on:

- UDUS - the UNSW Internet Service
- UDUS/Uniwide/Uniweb payments/queries/problems
- UNSW online services queries and problems
- WebCT support

- UniPass requests
- UniMail & University email services
- UniWide - UNSW Campus Wireless Network

Please note that problems with faculty-based IT services should be directed to your school or faculty IT support.

The IT Service Desk Counter is located opposite the ICT Assist training room, Level 2, the Library. Email: servicedesk@unsw.edu.au, tel: (+61 2) 9385 1333 or 9385 1777, website: www.its.unsw.edu.au

Prizes

The University has over 400 prizes available that are presented to students for meritorious academic achievement. Prizes are in the form of medals, books, book vouchers, cash amounts and certificates and are awarded annually on the recommendation of the Head of School.

Scholarships

The University administers a number of scholarships for full-time study. Many of these have been made available by the generous donations and bequests of private donors and organisations.

Further details and the latest scholarship listings can be obtained by visiting the Scholarships@UNSW website (www.scholarships.unsw.edu.au) or by contacting the Scholarships and Financial Support Office. Tel: (+61 2) 9385 1708, email: scholarships@unsw.edu.au

New scholarships are advertised on the Scholarships website and on notice boards in schools and outside UNSW Student Central. To receive newsletters on the latest Scholarships information, subscribe to our mailing list by visiting the Scholarships@UNSW website: www.scholarships.unsw.edu.au

Services for ACCESS Students

Students who enrolled via the ACCESS entry scheme can receive support and referral from the Equity Officer (ACCESS), at the Equity and Diversity Unit on telephone (+61 2) 9385 5434, email equity-diversity@unsw.edu.au, location Level 9 Applied Science Building. More information can be found at: www.equity.unsw.edu.au/help.html#infstud.

Student Representatives

Each year a number of student members are elected to each faculty to represent all enrolled students in the faculty. These students have full voting rights at faculty meetings and committees and hence a direct input in decisions affecting students. Further information can be obtained from www.elections.unsw.edu.au

UNSW Bookshop

The UNSW Bookshop is located in the lower section of the Quadrangle building on the Kensington Campus. Phone: (+61 2) 9385 6622, email: orders@bookshop.unsw.edu.au, website: www.bookshop.unsw.edu.au

Text and reference book information is available online at: www.bookshop.unsw.edu.au/textlist.html

General Education

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Introduction

Why General Education?

Since its foundation, the University of New South Wales has been committed to the provision of a General Education Program for its undergraduate students. The University believes that a general education complements the more specialised learning undertaken in a student's chosen field of study and contributes to the flexibility which graduates are increasingly required to demonstrate. Employers repeatedly point to the complex nature of the modern work environment and advise that they highly value graduates with the skills provided by a broad general education, as well as the specialised knowledge provided in more narrowly defined degree programs. In addition, over many years graduates of this University have reported that they greatly valued their general education studies, which are found to be relevant to both career and personal development.

The General Education Program at UNSW intends to broaden and deepen students' understanding of the environment in which they live and work and to enhance their skills of critical analysis. Above all, the program presents students with interesting, challenging and enjoyable opportunities to pursue their own intellectual curiosity.

Objectives

Objectives of the General Education Program

The following objectives were approved by the Council of the University in December 1994 and with some minor changes in 2005:

1. To provide a learning environment in which students acquire, develop, and deploy skills of rational thought and critical analysis.
2. To enable students to evaluate arguments and information.
3. To empower students to systematically challenge received traditions of knowledge, beliefs and values.
4. To enable students to acquire skills and competencies, including appropriate written and spoken communication skills.

5. To ensure that students examine the purposes and consequences of their education and experience at University, and to foster acceptance of professional and ethical action and the social responsibility of graduates.

6. To foster among students the competence and the confidence to contribute creatively and responsibly to the development of their society.

7. To provide structured opportunities for students from disparate disciplines to interact cooperatively within a learning situation.

8. To provide opportunities for students to explore discipline and paradigm bases other than those of their professional or major disciplinary specialisation through non-specialist courses offered in those other areas.

9. To provide an environment in which students are able to experience the benefits of moving beyond the knowledge boundaries of a single discipline and explore cross and interdisciplinary connections, and cross-cultural contexts.

10. To provide a learning environment and teaching methodology in which students can bring the approaches of a number of disciplines to bear on a complex problem or issue.

General Education Requirements

The University's basic requirements are the same for students in all single degree programs. Students must:

(a) satisfactorily complete a minimum of 12 units of credit in General Education courses or their equivalent (unless otherwise entitled to exemption – see below). Combined undergraduate degrees offered with another faculty and leading to the award of two degrees satisfy the first requirement (12 units of credit in General Education) within the program.

(b) undertake additionally 56 hours of study which examines the purposes and consequences of their university education and which fosters socially, ethically and professionally responsible behaviour. The extent to which individual programs meet this requirement varies from program to program. In the Faculty of Arts and Social Sciences, for example, this requirement is satisfied in the BA degree through an ARTS3000 course.

In some other degrees of the Faculty of Arts, it is distributed throughout the program. Most programs in the Faculty of the Built Environment fulfill the latter requirement as part of the normal program curriculum. However, in the case of both the BBCM and BSc(Arch) programs, students are required to take BENV1382, Social Responsibility and Professional Ethics.

Restrictions and students' choices

In order to ensure that students have the maximum amount of choice possible in the courses that can be taken to fulfill the General Education requirement, all programs have agreed to allow students to select either:

- courses that were developed especially for the General Education Program (these courses are listed at the back of this Handbook and have a course identifier that begins GEN);
- a limited number of 'mainstream' courses that are offered in the degree programs of other faculties.

However, certain restrictions apply to students' choices:

Students may undertake a maximum of three units of credit from approved General Education courses within the faculty which is the program authority for the program in which that student is enrolled.* Further General Education courses may be drawn from any other faculties with a maximum of six units of credit to be drawn from any one faculty, other than the faculty that has the authority for the program in which the student is enrolled.

* The Faculty of Commerce and Economics has not approved GE courses offered by FCE to be available to students enrolled in FCE degree programs.

The following rules will apply:

(a) Where students have been granted advanced standing in any program, any remaining General Education requirements in those programs must be met from courses offered in a faculty other than the faculty which is the program authority for the program in which the student is enrolled.

(b) In programs that have a partial exemption from General Education, the remaining General Education courses must be taken in faculties other than the faculty that is the program authority for the program in which the student is enrolled.

Faculties must identify any of their mainstream courses which overlap substantially with the General Education courses offered within that faculty and must stipulate that students who have completed or are completing these mainstream overlapping courses are excluded from enrolment in the related General Education course.

Additionally:

- the program requirements for each faculty which relate to the undergraduate degree programs offered by that faculty, may in some cases limit the number or type of 'mainstream' courses a student may include in the total number of courses necessary to complete their General Education requirement (in any case 'mainstream' courses may substitute for a maximum of 50% of the General Education requirement for a course), and
- students' first choices cannot be guaranteed, as students in later program stages will be given preference over those in earlier stages; quotas may be set for different faculties and courses. Courses with insufficient enrolments will be cancelled by 31 January (for Session 1 courses) and 27 June (for Session 2 courses). Staff leave means that not all courses are necessarily offered each session or year.

Exemption from Part or All of the General Education Program

There will be no general exemptions for students enrolled in single degree programs.

Students enrolling in combined programs

As a general rule, students enrolled in combined undergraduate programs leading to the award of two degrees, each in a different faculty, meet their General Education requirements.

Variation to the General Education requirement in some combined programs may have been approved. Students enrolled in combined programs should check their General Education requirements with their faculty or program office.

Special student exemptions

Students transferring from one faculty to another at UNSW, or from another higher education/tertiary institution, who believe that their prior learning and/or qualification satisfies the University's General Education objectives are eligible to seek exemption from all, or part of the UNSW General Education requirements (4 courses or 12 units of credit).

Applicants for exemption must supply full written justification for their request, plus appropriate documentation, showing how they have satisfied the GE objectives (see above). Applications will be considered on a case by case, and course by course basis by the faculty, which will make a determination and notify the student accordingly. The faculty's yardsticks will be:

- the extent to which the courses nominated for exemption satisfy sufficient GE objectives (i.e. cooperative interaction with students in other disciplines, most importantly; skills/competencies complementary to the major discipline area; social and ethical responsibility and development; empowerment to challenge traditional knowledge/paradigms);
- the extent to which the previous program is different in paradigm and content to that in which the student is presently enrolled;
- the length of previous study undertaken, where, in principle, 1 year might qualify for exemption from one GE course (3 units of credit), 2 years for 6 UOC, 3 years for 9 UOC and 4 years for 12 UOC.

In all cases, the onus is on the student to present a written justification.

Note: Life experience and/or mature age entry are not grounds for exemption.

Practical experience/industry placement is not grounds for exemption.

Substitution

Students may apply to their faculty for approval to substitute any course(s) from other faculties for General Education courses up to a total maximum of 6 units of credit (or 50%) of General Education. Substitution requests must be submitted in writing and approved prior to enrolment and state how the proposed courses will satisfy the GE objectives in their program, together with the remainder of the student's GE program. The faculty

will approve the request if satisfied that the substitution(s) will indeed allow this to occur.

Students may substitute the study of Language Other Than English (LOTE) within their General Education program. English (and other languages) as offered by the Institute of Languages or Learning Centre are excluded. Only languages offered by academic units are acceptable; a maximum of 50% of General Education can be substituted with language courses.

- Irrespective of the amount of units of credit associated with a mainstream course, students can only count 6 UOC towards the General Education requirement.
- Students should ensure that the substitute course has a seminar component. It is unlikely that the Faculty will accept it otherwise.

Co-requisites and exclusions

The Committee on Education will determine co-requisites and exclusions as and when necessary.

Faculty General Education Requirements

Each faculty has the responsibility for deciding what courses are not able to be counted towards the General Education requirement for their students. This may mean that courses offered by the faculty in which a student is enrolled, or courses which are a required part of a program even though offered by another faculty, are not able to be counted toward the General Education requirement.

Information concerning the substitution of other university courses or exemption from some General Education courses on the basis of previous formal study at tertiary level is available from the faculty or program office.

Student Involvement in the General Education Program

An important feature of the General Education Program is that student representation on committees that make decisions about General Education is assured. There are two student members on the Academic Board's Committee on Education. All General Education courses are required to be regularly evaluated by students and the results of the evaluations made known to the members of all faculties whose students are taking those courses.

Administrative Arrangements

The enrolment process

Students enrol in General Education courses through **myUNSW** (<https://my.unsw.edu.au>) the web interface to the University's student information system, in the same way that they enrol in other courses.

Before nominating the General Education courses they wish to take, students should ensure that they are familiar with:

- the relevant faculty and program policy and procedures for General Education including approval requirements, as set out in this Handbook and additional faculty program policy and enrolment information.
- the General Education course timetable, which includes lecture and tutorial times and the campus on which the course is taught.
- how many General Education courses (or General Education units of credit) they have completed, and how many they are still required to complete.
- their own timetable for 2006, including times which they have available to take General Education courses.
- where a course is offered in more than one class (that is, the course is streamed and students must register for a particular stream), students must ensure that they enrol into the correct class using myUNSW.

Students will be able to vary their enrolment in General Education courses, subject to places in other courses being available. Course enrolment variations will be conducted through myUNSW.

Students who are unable to enrol through myUNSW should contact their faculty or program office regarding alternative enrolment arrangements.

Quotas and preferences

General Education courses may have enrolment quotas set for both overall course enrolments and for each faculty. Although these quotas are flexible, students may be unable to enrol in a particular course because it is already full. In these cases, students may attempt to enrol in the class at a later time, as places may become available.

To increase the chances of enrolment in first preference courses, the University will generally try to allocate enrolment appointment times to students who have progressed furthest in their degree program, before students in earlier stages of their program. This means that if a student misses out on admission to a course in one year, they are more likely to be successful in subsequent years, as they gain more senior status in their program.

Alternative mode courses

Most General Education courses (with GEN prefix) will be offered in the format of one lecture and one tutorial per week. However, in developing courses for the General Education program a number of faculties have put forward courses that can be completed in a more intensive mode – either over a summer session, or in some other non-standard arrangement. Some approved courses will be offered in an open learning or distance learning format, supported by electronic delivery techniques. It is hoped that the choice of delivery mode will increase in response to student preferences and the course evaluation process.

Campus at which courses are taught

General Education courses are taught at Kensington as well as the Paddington (Faculty of the College of Fine Arts) campus. Students may enrol in courses offered on either campus provided the courses have been approved as part of their General Education requirement.

Separate arrangements are in place for students of the Australian Defence Force Academy and of the Australian Taxation Studies Program. Students in these programs should consult their faculty for information on courses and venues.

Units of Credit, Fees & Charges and General Education

The University's academic structure is based on 'units of credit'. A fulltime enrolment for one year is defined as 48 units of credit (24 per session). A course will have the same unit of credit value and generate the same load for student contribution charges and tuition fees irrespective of the program or stage in which it is taken. All courses are measured in whole units of credit. The normal workload expectations are 25–30 hours per session for each unit of credit, including class contact hours, preparation and time spent on all assessable work.

Every course in the University has a unit of credit value, with program requirements defined, in part, in terms of the completion of a specified number of units of credit. The most important thing to remember about

units of credit and General Education is that, because the General Education Program is an integral component of each undergraduate degree program at UNSW, units of credit earned for General Education are not additional to program requirements, but rather are a required part of each program. For the same reason, students do not pay extra for undertaking General Education courses.

Student contribution charges and tuition fees are based on the student's total study load, taking into account the discipline grouping of the unit of study. Student load is calculated on the sum of the units of credit of all courses undertaken (including General Education courses) as a proportion of the specific full-time total (48 units of credit) for the particular stage of the program.

All General Education courses form part of the discipline group which includes Arts, Humanities, Social Studies/Behavioural Science and Visual/Performing Arts which attracts the lowest level of charges.

Where approval is given to undertake mainstream courses instead of General Education courses, these courses will be charged according to the discipline grouping of the unit of study.

The Heinz Harant Challenge Prize

A prize of \$1,000, awarded twice yearly, has been established especially for work done by students in the UNSW General Education Program. The prize commemorates one of the University's earliest alumni and most devoted supporters, the late Heinz Harant. It is called 'The Heinz Harant Challenge Prize' because challenging orthodoxy was the driving spirit of Heinz Harant's life and the prize attempts to recognise this belief.

The prize recognises challenging and original thinking in work submitted for assessment in a General Education course. Academics in charge of General Education courses will be asked to select items of work of high standard and which they judge to be in keeping with the spirit of this prize.

Students may also submit their own work of high standard if they feel that it meets the spirit of the prize. Entry forms are available from UNSW Student Central and work must be submitted within one month of the close of the session in which the course is offered. At the end of Session 1 for courses completed in Session 1 or the Summer Session, and again at the end of Session 2 for courses completed in Session 2, a small number of items are selected for submission to a judging panel, subject to the author's consent.

General Education Courses

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

Out-of-session General Education Courses

Summer Session – Kensington Campus

Faculty of Arts and Social Sciences

Course	Session	Title
GENT0420	X1	Along the Silk Road
GENT0902	X1	Witches, Quacks and Lunatics
GENT0903	X1	Environmental Conflicts
GENT1206	X1	Australian Feminist Issues
GENT1207	X1	Crime, Sex and Gender
GENT1209	X1	Migration and Australian Society

Faculty of Commerce and Economics

Course	Session	Title
GENC5001	X1	Introduction to the Internet and Electronic Commerce

Faculty of Engineering

Course	Session	Title
GENE7801	X1	Energy and Mineral Resources – Use or Abuse?

Faculty of Law

Course	Session	Title
GENL0230	X1	Law in the Information Age
GENL1020	X1	World Religions: Customs and Laws
GENL5020	X1	Business Fundamentals

Faculty of Medicine

Course	Session	Title
GENM0201	X1	Human Origins, Human Problems
GENM0510	X1	Using the Media: Promotion Through Mass Media and Multimedia
GENM0512	X1	(Mis)representation of Health
GENM0518	X1	Health and Power in an Internet Age
GENM0703	X1	Concepts of Physical Fitness and Health

Faculty of Science

Course	Session	Title
GENS1004	X1	Cinema and Science
GENS2002	X1	Mathematics in Art and Architecture
GENS3501	X1	Metals, Ceramics, Plastics – Building the 21st Century
GENS4001	X1	Astronomy
GENS5002	X1	Aviation: Contemporary Issues in a Complex Sociotechnical System
GENS6033	X1	HIV and Other Unconquered Infections
GENS6071	X1	Technological, Social and Business Aspects of Alcohol
GENS8001	X1	Risk, Perception and Reality
GENS8003	X1	Work and Safety
GENS8004	X1	Ergonomics, Productivity and Safety
GENS8005	X1	Environmental Management in the Workplace

Summer Session – Paddington Campus

Faculty of the College of Fine Arts

Course	Session	Title
GEND1202	X1	Drawing the Body, Studies of Surface Anatomy
GEND1203	X1	Drawing the World Within/Without
GEND1204	X1	Studies in Painting
GEND1205	X1	Making a Print
GEND1208	X1	Studies in Sculpture
GEND1209	X1	Studies in the Camera
GEND1210	X1	Studies in the Print
GEND1212	X1	Analysing a Picture: Composition and Design in Art

GEND2202	X1	Multicultural Contexts
GEND3231	X1	Picturing Death: Art and the Human Predicament
GEND3233	X1	Scandals of Modern Art
GEND4205	X1	Design Communications and Presentation
GEND4207	X1	Designing: Models as a Tool for Communication
GEND4208	X1	Working with Ceramics
GEND4209	X1	Working with Jewellery
GEND4210	X1	Textiles and Fashion
GEND4211	X1	Design in Performance
GEND4212	X1	Design in Adornment and Costume
GEND4213	X1	The Arts of Aboriginal People and Torres Strait Islanders
GEND4214	X1	Surface & Image in Tapestry Weaving

Winter Session – Kensington Campus

Faculty of Arts and Social Sciences

Course	Session	Title
GENT1202	X2	Social Aspects of Deviance
GENT1403	X2	Global Crisis: Transition to a Sustainable Society

Faculty of Engineering

Course	Session	Title
GENE1012	X2	Tools for Implementing Ecologically Sustainable Development in Corporations and Regions
GENE7801	X2	Energy and Mineral Resources – Use or Abuse?

Faculty of Medicine

Course	Session	Title
GENM0201	X2	Human Origins, Human Problems
GENM0202	X2	Frontiers in Brain Research
GENM0510	X2	Using the Media: Promotion Through Mass Media and Multimedia
GENM0518	X2	Health and Power in an Internet Age

Faculty of Science

Course	Session	Title
GENS2002	X2	Mathematics in Art & Architecture
GENS6012	X2	Diet – Food, Fact, Fiction and Fallacy
GENS6032	X2	Great Epidemics in History
GENS7602	X2	Viewing the Earth through a Geological Window
GENS7604	X2	Energy Resources for the 21st Century
GENS8003	X2	Work and Safety
GENS8004	X2	Ergonomics, Productivity and Safety
GENS8005	X2	Environmental Management in the Workplace

Winter Session – Paddington Campus

Faculty of the College of Fine Arts

Course	Session	Title
GEND1202	X2	Drawing the Body, Studies of Surface Anatomy
GEND1203	X2	Drawing the World Within/Without
GEND1204	X2	Studies in Painting
GEND1205	X2	Making a Print
GEND1208	X2	Studies in Sculpture
GEND1209	X2	Studies in the Camera
GEND1210	X2	Studies in the Print
GEND1211	X2	The Artist's Studio
GEND2201	X2	Art Therapy
GEND2202	X2	Multicultural Contexts
GEND2205	X2	Dialogues and Communities
GEND3230	X2	Art, Money and Power
GEND3231	X2	Picturing Death: Art and the Human Predicament
GEND4204	X2	Designing: Practical Studies in Design
GEND4205	X2	Design Communications and Presentation
GEND4206	X2	Integrated Design Studio
GEND4208	X2	Working with Ceramics

GEND4209	X2	Working with Jewellery
GEND4210	X2	Textiles and Fashion
GEND4211	X2	Design in Performance
GEND4212	X2	Design in Adornment and Costume
GEND4214	X2	Surface & Image in Tapestry Weaving
GEND5201	X2	Landscape Animation

In-Session General Education Courses

Kensington Campus

Nura Gili (Indigenous Programs)

Course	Session	Title
GENX0101	S1	Indigenous Australia – Travelling through Time
GENX0102	S2	Indigenous Australia – The Present
GENX0103	S1	Aboriginal Heritage: From Diggings to Display
GENX0104	S2	Aboriginal Popular Culture

Faculty of Arts and Social Sciences

Course	Session	Title
GENT0201	S2	Communication Skills
GENT0209	S1	Great Books
GENT0310	S1 & S2	Opiate of the People: Religion and Western Society, 1500 2000
GENT0312	S1	Dressed to Kill: Dress and Identity in History
GENT0404	S1 & S2	Gods, Heroines and Heroes in Greek Mythology
GENT0405	S2	An Introduction to “...isms”: Ideas that have Shaped our World
GENT0414	S2	Korea at a Glance
GENT0421	S1	Chinese Cinema
GENT0436	S1	Chinese Language for Beginners A
GENT0437	S2	Chinese Language for Beginners B
GENT0501	S1	Life-Giving Songs
GENT0503	S1	Jazz and Popular Music Studies
GENT0504	S1 & S2	Performance and Practice of Music A
GENT0505	S1 & S2	Performance and Practice of Music B
GENT0506	S2	Music Technology
GENT0604	S2	Critical Thinking and Practical Reasoning
GENT0606	S1 & S2	The Use of Language, Images and Symbols
GENT0707	S1	Globalisation and the Nation State
GENT0803	S1	Introduction to Australian Cinema
GENT0804	S2	Internet and Cyberculture
GENT0911	S1	Murderers, Maniacs and Medical Detectives
GENT1205	S2	Experiencing Anthropology Through Fieldwork
GENT1301	S2	Contemporary American Film
GENT1401	S1	Biopsychosocial Study of Humour
GENT1501	S1	Gifted and Talented Students: Recognition and Response
GENT1502	S2	Student Learning, Thinking and Problem Solving
GENT1503	S1	Introduction to Educational Psychology
GENT1507	S2	Learning Processes and Instructional Procedures
GENT1508	S1	Managing Stress and Anxiety
GENT1513	S1	Culture, Identity and Education
GENT1520	S2	Motivation in Learning and Teaching
GENT1512	S1	Relationships Between Personality Mood, Motivation and Learning
GENT1514	S2	Ideology and Power in Education

Faculty of the Built Environment

Course	Session	Title
GENR0003	S2	Spirit, Myth, Sacredness in Architecture
GENR0006	S1	The City: Sydney
GENR0012	S1	Great Buildings of the World
GENR0015	S1	City Planning Today

GENR0017	S2	Principles and Philosophy of Design
GENR0019	S1	Critical Perspectives on Twentieth Century Art and Design
GENR0027	S1 & S2	Photography, Society and Environment

Faculty of the College of Fine Arts – Kensington Campus

Course	Session	Title
GEND3218	S1	Psychoanalysis and Art
GEND3230	S1	Art, Money and Power
GEND3232	S1 & S2	Pornography, Art and Politics
GEND3233	S2	Scandals of Modern Art

Faculty of Commerce and Economics

Course	Session	Title
GENC1003	S2	A User's Guide to Financial Management and Analysis
GENC2001	S1 & S2	An Introduction to the Australian Economy (Class: CKC1)
GENC3003	S1	User's Guide to Personal Financial Planning
GENC6001	S1 & S2	An Introduction to Marketing
GENC6002	S1 & S2	Marketing and the Consumer
GENC6003	S1 & S2	Tourism: the Global Future
GENC7002	S1 & S2	Getting into Business
GENC7003	S1 & S2	Managing your Business
GENC9002	S1 & S2	Web Information Resources
GENC3001	S2	Understanding Asian Banking and Finance

Faculty of Engineering

Course	Session	Title
GENE1011	S1 & S2	From Catchment to Ocean
GENE3051	S1	Solar Cars – Speed of Light
GENE4001	S1	Biomedical Engineering Technology in Medicine
GENE7001	S1	Oil & Gas: The Life Blood of Society
GENE7801	S1 & S2	Energy and Mineral Resources – Use or Abuse?
GENE8000	S1	Spreadsheet & Database Applications
GENE8001	S2	Computer Game Design Workshop

Faculty of Law

Course	Session	Title
GENL0250	S1 & S2	Sport, Law & Society in Australia
GENL1020	S1 & S2	World Religions: Laws and Customs
GENL1060	S2	Moral and Legal Foundations of Human Rights
GENL1061	S1	Religion and Terror
GENL2020	S1 & S2	Introduction to the Australian Legal System
GENL2031	S1 & S2	Cyberspace Law: Regulation of Networked Transactions
GENL5020	S1 & S2	Business Fundamentals
GENL5030	S1	Understanding Tax

Faculty of Medicine

Course	Session	Title
GENM0123	S1	Children – Growing Up in Society
GENM0701	S1 & S2	Contemporary Bioethics
GENM0703	S1 & S2	Concepts of Physical Fitness and Health

Faculty of Science

Course	Session	Title
GENS0450	S1	Measuring up the Universe
GENS0501	S1 & S2	The Marine Environment
GENS2005	S2	History of Mathematics
GENS2006*	S1	Introduction to New Testament Greek
GENS3502*	S1	Materials in Sport
GENS4001	S1 & S2	Astronomy
GENS4008	S2	Nuclear Arms and the New World Order
GENS4010	S1 & S2	Science and Religion
GENS4011	S2	Science of Music
GENS4014	S1 & S2	Are We Alone? The Search for Life Elsewhere in the Universe

GENS4015	S1 & S2	Brave New World: Science Fiction, Science Fact and the Future
GENS5001	S1 & S2	Flight and Civilisation
GENS5002	S1 & S2	Aviation: Contemporary Issues in a Complex Sociotechnical System
GENS6011	S1	The Consumer's Guide to DNA
GENS6013	S2	Plants and People: Murder, Magic and Medicine
GENS6014	S2	Genes and Society
GENS6033	S2	HIV and Other Unconquered Infections
GENS7201	S1 & S2	Australian Wildlife Biology
GENS8002	S1	Sports Performance and Injury Prevention
GENS8003	S1 & S2	Work and Safety
GENS8004	S1 & S2	Ergonomics, Productivity and Safety
GENS8005	S1 & S2	Environmental Management in the Workplace
GENS9001	S1	Psychology of the Individual and the Group
GENS9002	S2	Psychology of the Body and the Mind
GENS9007	S2	The Psychobiology of Sex, Love and Attraction
GENS9008	S1	Stereotyping and Prejudice
GENS9009*	S2	Sport and Exercise Psychology

* - Pending approval by Faculty Standing Committee

Paddington Campus

Faculty of the College of Fine Arts

Course	Session	Title
GEND1203	S1 & S2	Drawing the World Within/Without
GEND1204	S1 & S2	Studies in Painting
GEND1209	S1 & S2	Studies in the Camera – Analogue Photography
GEND1210	S1 & S2	Studies in the Print – Analogue Photography
GEND4202	S1	Design and Human Functioning
GEND4203	S1 & S2	Design Management
GEND4208	S1 & S2	Working with Ceramics
GEND4209	S1 & S2	Working with Jewellery
GEND4210	S1 & S2	Textiles and Fashion
GEND4211	S1 & S2	Design in Performance
GEND4212	S1 & S2	Design in Adornment and Costume
GEND4214	S1 & S2	Surface and Image in Tapestry Weaving

Faculty of Arts and Social Sciences

A Message from the Dean

A warm welcome to the Faculty of Arts and Social Sciences at the University of New South Wales. I am sure you will find your studies with us exciting, challenging and rewarding.

The Faculty has 350 staff and 3893 undergraduate students. Over recent years competition to enter the Faculty's programs has become very vigorous, as our distinctive profile and provision of excellent teaching and learning experiences become more widely recognised. Our staff are highly qualified and experienced researchers as well as being dedicated teachers. The benefits to students which flow from the combination of research with teaching are widely recognised in the world's top universities.

Employers in today's world increasingly value the skills gained by students who have studied in the Arts and Social Sciences fields. These include the ability to write accurately and concisely, to express and critique a point of view, to analyse thoroughly and objectively, and to speak in public readily and with confidence. No matter what specific areas of interest our students follow, they will graduate with a high level of skill and experience in using computers, databases and research tools, the ability to document sources carefully, to manage time, and work in cross-cultural contexts. Many will have studied one or more languages in addition to their mother tongue, and in some areas of study they will have obtained high level skills in research design and statistical analysis.

Degrees can be tailored to meet students' own aims and goals, by combining different disciplines and areas of specialised study. Graduates are highly valued in many occupations: in commerce and business, policy studies, governmental organisations, international bodies, the diplomatic service, corporate affairs and human resources, and will be found also in vocations and occupations such as education and social work, public health and community service, advertising, media and public relations. Many of our graduates are now renowned writers and film-makers, not to mention our distinguished History graduate, the former premier of NSW, Mr Bob Carr.

We encourage all our students who are qualified to do so to undertake a fourth year Honours program. This enhances the skill-base by permitting a student to undertake a sustained and significant piece of research under the supervision of a staff member. Employers are particularly impressed by a good Honours degree.

The Faculty fosters friendly and co-operative relations between staff and students. Advice can readily be obtained from the Faculty office, thence for more specialised assistance from your lecturers and tutors, and other administrative staff. You can also undertake a period of internship for credit, which will be arranged by our Internship Officer, and periods of international exchange are available for all students, usually in the second year, where you can be located for one semester's study in a highly recognised university in a country of your choice. All arrangements for exchanges are managed by the University. Many other unique opportunities are open for students in the Faculty. I believe your period of study here will be highly rewarding both personally and professionally and welcome you as one of our most important assets, our fine students.

Annette Hamilton
Dean
Arts and Social Sciences

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Faculty Information and Assistance

Who Can Help?

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of Arts and Social Sciences.

Enquiries about degree requirements, enrolment, progression within programs, program transfers or any other general Faculty matters should be made to the staff in the Faculty of Arts and Social Sciences Office, G1, Morven Brown Building, Telephone: (02) 9385 2289, Fax: (02) 9385 1492, Email: artsunsw@unsw.edu.au. Advanced standing, exemption and leave forms are available from the Office. The Office is normally open for enquiries from 9.00 am – 12.30 pm and 1.30 pm – 4.30 pm Monday to Friday.

Enquiries about course content and class locations should be directed to school offices.

Faculty of Arts and Social Sciences Website

The Faculty of Arts and Social Sciences maintains its own web server at www.arts.unsw.edu.au which provides information to prospective students as well as timetable and course information for current students.

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

Advanced Standing

Students admitted with advanced standing are given credit towards the degree for all appropriate courses up to a maximum of two thirds of the total units of credit required for each degree. Specified credit will be given for courses closely related to courses offered within our degree programs; unspecified credit may be given for other "Arts-type" courses, if they are of appropriate standard and range.

ARTS2000 Faculty Internship

ARTS2000 offers selected second and third year Arts and Social Sciences students an internship experience in a range of organisations outside UNSW. This practical work-place experience is accompanied by a reading program. The reading component examines different approaches to the study of organisations, their structures, functions and policies, and links these issues to the internship experience. The internship component provides work experience in a host organisation for a minimum of one day a week throughout one session or an equivalent block of time. The internship may be undertaken at any time during the year but is subject to the availability of a suitable host organisation. The course may be included as part of a major sequence with the prior permission of the relevant Head of School. For more information, contact Zarni Jaugietis, telephone (02) 9385 1443, email zarni@unsw.edu.au

ARTS2000 Arts and Social Sciences Internship X1 S1 X2 S2

ARTS3000 Courses

Objective 5 of the University's General Education program requires all faculties "to ensure that students examine the purposes and consequences of their education and experience at University, and to foster acceptance of professional and ethical action and the social responsibility of graduates." In some programs administered by the Faculty of Arts and Social Sciences this objective is met entirely by the content of compulsory core courses, while in others it is met partly by the structure of the degree and partly by ARTS3000 level courses specifically designed for this purpose.

Degrees in which at least one ARTS3000 course must be included are the Bachelor of Arts and the Bachelor of International Studies. Bachelor of Music and Bachelor of Music/Bachelor of Arts students must complete either an ARTS3000 course or MUSC3101. ARTS3000 courses are also available as elective courses for students in other degrees. These courses should normally be taken in a student's third year of study.

ARTS3001	Censorship and Responsibility in the Performing Arts, Film, Literature and Media	S2
ARTS3002	Making Histories and Historians: Ethics, Scholarship and Public Roles	S1 & S2
ARTS3005	Arts and Social Sciences Graduates in the Workplace: Ethical & Social Responsibility	S1
ARTS3006	Corruption and Integrity in Public Life	S2
ARTS3007	East Asian Values and Identities	X1
ARTS3010	Feminist Thought and Action	X1

Faculty Computing Facilities

The Faculty of Arts and Social Sciences provides general purpose Macintosh computer laboratories in the Morven Brown and Mathews buildings. Special purpose laboratories are located in the Robert Webster Building. Self-access to the general purpose laboratories is available 24 hours 7 days per week. Printing charges apply. Access to email and the Internet is available. Further information can be obtained from the Technical Resources Centre, Room 105, Morven Brown Building. Room G63 in the Morven Brown Building is available to students in the Faculty for enrolment purposes.

Faculty Timetable

The Faculty Timetable is published in a separate booklet and will be distributed to new students on final enrolment. Students are able to access the information on the web at www.arts.unsw.edu.au in November.

Students in Years 2, 3 and 4 are reminded that alterations to the published timetable are occasionally made before the beginning of session. A check should be made with the appropriate school/department in late February for times of Upper Level courses.

General Education Requirements

Where a General Education requirement is prescribed, students must complete the equivalent of 12 units of credit from the University's General Education program. Arts and Social Science students should choose their courses in accordance with the requirements set out in the General Education section of this Handbook. No more than three units of credit can be chosen from courses with a GENT prefix.

Information concerning the substitution of other university courses or exemptions from some General Education courses on the basis of previous formal study is available from the Faculty Office.

Re-enrolment Procedures

All students of the Faculty are expected to re-enrol via the web, apart from those who intend to enrol in an Honours program in 2006. Honours pre-enrolment forms will be available from school offices in December and will need to be returned to the Faculty Office by the second last week of December. Failure to re-enrol a week before the beginning of session may incur a late fee.

Societies and Clubs

For information about societies and clubs in the Faculty of Arts and Social Sciences, refer to the Faculty website at www.arts.unsw.edu.au/currentstudents/undergraduate/clubs.shtml or contact the individual schools/departments.

Faculty Rules

Standard enrolment

1. (a) In any year of study, students must enrol in a minimum of 24 units of credit, unless they require less than that number to complete the requirements for the degree. (b) In their first year of study, full-time students will normally complete 48 units of credit; in subsequent semesters, they will normally complete 24 units, but may be permitted to enrol in an additional 6 units.

Prerequisite and corequisite requirements

2. A student enrolling in a course must satisfy the prerequisite and corequisite requirements for that course.

Progression

3. In order to obtain units of credit for a course, a student must in that course:

- (a) satisfy attendance requirements;
- (b) complete satisfactorily any assignments prescribed;
- (c) pass any prescribed examination.

4. Students are not permitted to enrol in Upper Level courses until they have completed at least 36 Level 1 units of credit.

5. Students are required to complete at least 12 units of credit at Level 3 in any program or major sequence offered by the Faculty of Arts and Social Sciences.

6. Students who fail to complete at least 24 units of credit in any year may be required to 'show cause' as to why they should be permitted to proceed with their studies.

7. Students whose progress is satisfactory may apply for leave of absence from their studies for no more than two semesters.

Concurrent study

8. No student may enrol in any course to be counted towards degrees offered by the Faculty of Arts and Social Sciences at the same time as he/she is enrolled in any other degree or diploma program, except in the case of approved concurrent programs.

Study at another university

9. With the prior approval of Faculty, up to 48 units may be completed at another university, unless equivalent courses are available at the University of New South Wales. Faculty will not approve courses offered by external study.

10. Students must have completed at least 48 units of credit in courses offered by the Faculty before a period of study overseas will be approved.

Advanced standing

11. Students seeking advanced standing must submit documentary evidence of courses completed elsewhere and specify the courses they wish to complete within the Faculty. Faculty will then determine the number of units of credit to be granted. Advanced standing will not be granted for courses completed more than 10 years previously.

Transfers

12. (a) The Faculty will grant the maximum credit possible to facilitate a student's transfer from one degree to another. The credit will vary depending on the degrees concerned. (b) A student enrolled in the combined Arts/Law program who does not wish to proceed to the combined degree BA LLB may apply to transfer to the BA degree with credit for all courses completed in the program.

Special admission to Honours

13. Students who have been awarded a degree at Pass level from the University of New South Wales or a comparable degree from another university may be admitted by Faculty to candidature for the award of that degree at Honours level with credit for all courses completed if, during their studies for the Pass degree, they have satisfied the prerequisites for entry to the Honours level program or completed an equivalent program of study. Permission will not be granted if more than three years have elapsed since the completion of the Pass degree.

Modification of requirements

14. Faculty may modify the requirements of any of these rules in special circumstances.

Key to Course Identifiers

The following table shows the organisational unit and faculty responsible for all courses offered in the Faculty of Arts and Social Sciences.

Courses whose prefixes are not listed below are not available for students enrolled in the Faculty of Arts and Social Sciences.

Prefix	Organisational Unit	Faculty
ARTS	Faculty of Arts & Social Sciences	
ASIA	Faculty of Arts & Social Sciences	
ATSI	Nura Gili (Indigenous Programs)	
AUST	Faculty of Arts & Social Sciences	
BEES	School of Biological, Earth and Environmental Sciences	Science
BIOS	School of Biological, Earth and Environmental Sciences	Science
CHEM	School of Chemical Sciences	Science
CHIN	Department of Chinese & Indonesian Studies	Arts & Social Sciences
COMD	Faculty of Arts & Social Sciences	
COMP	School of Computer Science & Engineering	Engineering
CRIM	School of Social Science & Policy	Arts & Social Sciences
DANC	School of Media, Film and Theatre	Arts & Social Sciences
ECON	School of Economics	Commerce & Economics
EDST	School of Education	Arts & Social Sciences
ENGL	School of English	Arts & Social Sciences
EURO	Faculty of Arts & Social Sciences	
FREN	Department of French	Arts & Social Sciences
GENB	Faculty of Science	
GENC	Faculty of Commerce and Economics	
GEND	Faculty of College of Fine Arts	
GENE	Faculty of Engineering	
GENL	Faculty of Law	
GENM	Faculty of Medicine	
GENR	Faculty of Built Environment	
GENS	Faculty of Science	
GENT	Faculty of Arts & Social Sciences	
GENX	Nura Gili (Indigenous Programs)	
GEOH/		
GEOS	School of Biological, Earth and Environmental Sciences	Science
GERS	School of Modern Language Studies	Arts & Social Sciences
GLST	Faculty of Arts & Social Sciences	
GMAT	School of Surveying and Spatial Information Systems	Engineering
GREK	School of Modern Language Studies	Arts & Social Sciences
HIST	School of History	Arts & Social Sciences

HPSC	School of History and Philosophy of Science	Arts & Social Sciences
INDO	Department of Chinese & Indonesian Studies	Arts & Social Sciences
INST	Faculty of Arts & Social Sciences	
INTD	Faculty of Arts & Social Sciences	
IRSH	Faculty of Arts & Social Sciences	
ITAL	School of Modern Language Studies	Arts & Social Sciences
JAPN	Department of Japanese & Korean Studies	Arts & Social Sciences
JWST	Faculty of Arts & Social Sciences	
KORE	Department of Japanese & Korean Studies	Arts & Social Sciences
LATN	School of Modern Language Studies	Arts & Social Sciences
LAWS	School of Law	Law
LING	Department of Linguistics	Arts & Social Sciences
MATH	School of Mathematics	Science
MDCM/		
MEFT	School of Media, Film and Theatre	Arts & Social Sciences
MGMT	School of Organisation & Management	Commerce & Economics
MODL	School of Modern Language Studies	Arts & Social Sciences
MUSC	School of Music & Music Education	Arts & Social Sciences
PECO	Faculty of Arts & Social Sciences	
PHIL	School of Philosophy	Arts & Social Sciences
PHYS	School of Physics	Science
POLS	School of Politics & International Relations	Arts & Social Sciences
PSYC	School of Psychology	Science
RUSS	School of Modern Language Studies	Arts & Social Sciences
SAHT	School of Art History & Theory	College of Fine Arts
SLSP	School of Social Science & Policy	Arts & Social Sciences
SOCA	School of Sociology & Anthropology	Arts & Social Sciences
SOCW	School of Social Work	Arts & Social Sciences
SPAN	Department of Spanish & Latin American Studies	Arts & Social Sciences
WOMS	Faculty of Arts & Social Sciences	

Program Rules and Information

3400 Bachelor of Arts

BA

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Arts program is the most flexible of all the degree programs offered by the Faculty. The basic degree requirements are simple: an approved major sequence from List A (below) and a minimum of study in other areas. Apart from that, you will have a great deal of freedom to 'focus' your degree, by choosing related courses to contribute to a particular specialisation, or to choose a wider range of courses that reflect diverse interests.

Program Objectives and Learning Outcomes

An Arts degree is a pathway through a wealth of knowledge in the humanities and social sciences. Its objective is to stimulate students intellectually; to immerse them in worlds of learning; and to graduate them as citizens with strong written and oral communications skills, the capacity to research, criticise and reflect, and the ability to work independently and collaboratively.

Program Structure

The basic requirements for the degree are:

1. a total of 144 units of credit. Each course offered by the Faculty has a unit of credit rating, depending on the number of hours taught and the type of course.

2. 48 units of credit obtained in Level 1 courses i.e. courses designed for students in their first year of study. Of these, no more than 12 can be in any one sequence of study. 24 units of credit must be obtained from courses offered specifically by the Faculty.

3. a major sequence (**List A**) in one of the following:

AUST	Australian Studies
CHIN	Chinese Studies
COMD	Development Studies
EDST	Education
ENGL	English
	Environmental Studies
EURO	European Studies
FREN	French
GERS	German Studies
GREK	Greek
HIST	History
HPSC	History and Philosophy of Science
INDO	Indonesian Studies
JAPN	Japanese Studies
KORE	Korean Studies
LING	Linguistics
MEFT	Media, Culture and Technology/Film/Theatre and Performance Studies
MUSC	Music
PECO	Political Economy
PHIL	Philosophy
POLS	Politics and International Relations
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies
WOMS	Women's and Gender Studies

A major sequence is an approved progression of courses in a school, department or program: you will find details under the relevant entry.

4. at least 66 units of credit must be gained in courses offered by schools, departments or programs within the Faculty.

5. at least 66 units of credit gained in schools, departments or programs outside the school/department in which you are majoring, so that your program does not become too one-sided.

6. in addition to the areas listed under 3. above, major sequences (List B and C) are available in: Aboriginal Studies, Asian Studies, Cognitive Science, Irish Studies, Jewish Studies and Philosophy of Science (**List B**); Art History and Theory, Computing, Economics/Economic History, Geography, Geology, Human Resource Management, Industrial Relations, International Business, Mathematics and Psychology (**List C**).

7. during their second and third years of study, students are also required to complete 12 units of credit from the University's General Education program.

8. 6 units of credit in an Upper Level ARTS3000 course detailed in the Handbook.

How to Choose Your First Year Program

You must include the first year requirements for **at least two** major sequences in schools or departments within the Faculty of Arts and Social Sciences, as you must complete at least one to qualify for the degree. Find the courses you need from the corresponding entries in the online handbook: this will normally account for 24 units of credit of your first year program. In deciding what other courses to enrol in, you should consider which courses best complement the ones you have chosen. These may not necessarily be 'close relations'; for instance, a foreign language may be extremely useful for a history major, and vice versa. Unless you are a part-time student, you should enrol in courses carrying 48 units of credit.

Upper Level and Honours Entry

In structuring your program for second and third year Upper Level, it is essential that you fulfill the **requirements for a major sequence** in the school(s) or department(s) in which you are specialising. If you have any doubts about them, make sure you consult a member of staff before enrolling in second year. Try to complement your majors with courses which will provide you with skills and perspectives which will contribute to a broader and more critical approach to your special areas of interest. Major sequences offered by programs such as AUST Australian Studies are designed to provide this kind of context. They offer an interdisciplinary

BA - Sample Program - Example Only			
YEAR ONE - 48 units of credit			
S1 Politics & IR (6)	Sociology (6)	History (6)	Spanish (6)
S2 Politics & IR (6)	Sociology (6)	History (6)	Spanish (6)
YEAR TWO - 48 units of credit			
S1 European Studies (6)	Sociology (6)	History (6)	
General Education (3)			
S2 Linguistics (6)	Sociology (6)	History (6)	
General Education (3)	Sociology (6)		
YEAR THREE - 48 units of credit			
S1 European Studies (6)	Sociology (6)	History (6)	ARTS Course (6)
S2 General Education (3)	Sociology (6)	History (6)	
General Education (3)		History (6)	
Total required for BA - 144 units of credit			
	Major Sequence, 42 units of credit	Second Major Sequence 42 units of credit	

alternative to a school-based major, or simply a way of giving more coherence to your other courses. Comparisons and connections are often the best way of bringing the particular problems of an area of study into clearer focus. Members of staff may be able to recommend particular courses in other schools which will help you in the direction you wish to take.

While it is desirable that all Upper Level students seek advice on their program from their home school, it is **essential** for intending Honours students. If you want to proceed to fourth year Honours Level in one or two schools or programs, you should work out a program which fulfills the requirements for Honours Level entry with the Head of School or program Coordinator concerned as early as possible in second year. With Combined Honours (Honours in two schools/programs) in particular, this can avoid many later problems such as missing prerequisites.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over three years of study, a minimum of 144 units of credit in approved courses including:

1. a total of 48 Level 1 units of credit;
2. no more than 12 Level 1 units of credit in any one sequence of study from Lists A, B, and C below;
3. a major sequence of 42 units of credit from List A below;
4. at least 66 units of credit, including a minimum of 24 at Level 1, from sequences in Lists A and B;
5. at least 66 units of credit from courses offered outside the major sequence specified in 3. above, which may include major sequence(s) from Lists A, B or C;
6. 12 units of credit from the General Education program, normally taken in the second and third year of study;
7. 6 units of credit from a third year ARTS elective.

List A AUST Australian Studies, CHIN Chinese Studies, COMD Development Studies, EDST Education, ENGL English, Environmental Studies, EURO European Studies, FREN French, GERS German Studies, GREK Greek, HIST History, HPSC History and Philosophy of Science, INDO Indonesian Studies, JAPN Japanese Studies, KORE Korean Studies, LING Linguistics, MEFT Media, Film and Theatre, MUSC Music, PECO Political Economy, PHIL Philosophy, POLS Politics and International Relations, RUSS Russian Studies, SLSP Policy Studies, SOCA Sociology

and Anthropology, SPAN Spanish and Latin American Studies, WOMS Women's and Gender Studies.

List B ASIA Asian Studies, ATSI Aboriginal Studies, IRSH Irish Studies, JWST Jewish Studies, LATN Latin, Philosophy of Science, SOCW Social Work.

Majors are not available in Latin or Social Work.

List C BIOS Biological Science, CHEM Chemistry, COMP Computing, ECON Economics/Economic History, GEOH/GEOS Geography/Geology, GMAT Surveying Spatial Information and Systems, MATH Mathematics, MGMT Human Resource Management/Industrial Relations/International Business, PHYS Physics, PSYC Psychology, SAHT Art History and Theory.

Majors are not available in Chemistry, Physics or Surveying.

8. The Pass degree of Bachelor of Arts may be awarded with Distinction where a candidate has a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

9. have obtained 144 units of credit in accordance with 1.-7. above and satisfied the appropriate prerequisites for entry to the Honours level program;
10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

3402 Bachelor of Media and Communications

BA(Media)

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The program emphasises new computer-based multimedia skills and focuses on Australian media industries in relation to globalisation. The degree is vocationally relevant in its orientation and all students are given significant practical experience in new computer-based multimedia communication technologies.

In addition to studying the Media and Communications core program, students complete a major in the humanities or social sciences, to permit them to study a second field in depth by pursuing their interests in another area. First and second years cover multimedia writing and production and contextual media studies. The third year consolidates the program's emphasis on production and analytical skills. This grounding enables students to interpret, create and apply the products of new media not only in the context of the mass information and entertainment industries but also in a variety of other public and private sector areas such as education, on-the-job training and specialised information services.

A fourth (Honours) year of study is an option for selected students.

Program Objectives and Learning Outcomes

The Media and Communications program aims to develop in students a sophisticated understanding of the history, scope and socio-cultural impact of new media technologies, and of the debates that have accompanied their development and use. Second, it offers extensive experience in the production of new media content appropriate for employment in the contemporary media.

Program Structure

The basic requirements for the degree are:

1. a total of 144 units of credit. Each course offered within the degree has a unit of credit rating, depending on the number of hours taught and the type of course.

2. 48 units of credit in the Media and Communications (MDCM) core program:

First Year

MDCM1000 New Media Technologies A
MDCM1001 New Media Technologies B

Second Year

MDCM2000 Writing for New Media
MDCM2002 Media Production
MDCM2003 Multimedia Production

Third Year

MDCM3000 Media Forms
MDCM3002 Advanced Media Production
MDCM3003 Multimedia Production

3. 2 MDCM electives (12 Upper Level units of credit).

4. 1 elective (6 Upper Level units of credit) from the offerings of the Faculty of Arts and Social Sciences.

5. a major sequence (**List A**) in one of the following:

AUST	Australian Studies
CHIN	Chinese Studies
COMD	Development Studies
EDST	Education
ENGL	English
	Environmental Studies
EURO	European Studies
FREN	French
GERS	German Studies
GREK	Greek, Modern
HIST	History
HPSC	History and Philosophy of Science
INDO	Indonesian Studies
JAPN	Japanese Studies
KORE	Korean Studies
LING	Linguistics
MEFT	Media, Culture & Technology/Film/Theatre & Performance Studies

MUSC	Music
PECO	Political Economy
PHIL	Philosophy
POLS	Politics and International Relations
RUSS	Russian Studies
SLSP	Policy Studies
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies
WOMS	Women's and Gender Studies

A major sequence is an approved progression of courses in a school, department or program: you will find details under the relevant entry.

6. 48 units of credit obtained in Level 1 (first year) courses, including MDCM1000 and MDCM1001, and any first year courses in your major sequence. No more than 12 units of credit can be obtained in first year courses from any one school, department, unit or program, with

the exception of students wishing to pursue studies in Film, Theatre & Performance Studies or Media, Culture & Technology. These students can do up to 24 units of credit in Level 1 courses from the School of Media, Film and Theatre (MDCM1000, MDCM1001 and 12 units of credit in Level 1 courses with a MEFT prefix).

7. during their second and third years of study, students are also required to complete courses from the University's General Education program carrying the equivalent of 12 units of credit.

How to Choose Your First Year Program

Enrol in the core courses MDCM1000 and MDCM1001 (see 2. above); then choose one or more areas from 5. above in which you might like to major, and enrol in the appropriate first year (Level 1) courses. Then select additional first year courses to make up a total of 48 units of credit. 24 Level 1 units of credit must be selected from courses offered by the Faculty of Arts and Social Sciences.

Upper Level

In your second and third year, enrol in the prescribed core courses (see 2. above) and the necessary courses for your major sequence. The additional units of credit should be taken in other Upper Level courses and in courses from the University's General Education program. Try to spread your workload evenly over the four sessions of study.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over three years of study, a minimum of 144 units of credit in approved courses including:

1. the core program (48 units) in MDCM Media and Communications;
2. a major sequence from List A of the BA Rules;
3. a total of 48 Level 1 units of credit, including no more than 12 in any one sequence of study, from Lists A, B and C of the BA Rules;
4. two Upper Level MDCM electives outside the core program;
5. 12 units of credit from the General Education program, normally taken in the second and third year of study;
6. The Pass degree of Bachelor of Arts (Media and Communications) may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

7. have obtained 144 units of credit in accordance with 1.-5. above and satisfied the appropriate prerequisites for entry to the Honours level program;
8. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

3408 Bachelor of Arts (Dance) Bachelor of Education

BA(Dance)BEd

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Media, Film and Theatre offers a four-year full-time double degree for intending specialist dance educators leading to the award of Bachelor of Arts (Dance) Bachelor of Education.

Entry to the BA(Dance) BEd program is by audition and satisfactory University academic entry requirements.

BA (Media and Communications) - Sample Program - Example Only			
YEAR ONE 48 units of credit			
S1 English (6)	Film & Theatre (6)	New Media Technologies A (6)	Philosophy (6)
S2 English (6)	Film & Theatre (6)	New Media Technologies B (6)	Sociology (6)
YEAR TWO 48 units of credit			
S1	Film & Theatre (6)	Researching & Writing for New Media (6)	General Education (3)
S2 Elective (6) MDCM Elective (6)	Film & Theatre (6)	Media Production (6)	General Education (3)
YEAR THREE 48 units of credit			
S1	Film & Theatre (6)	Multimedia Production (6)	
S2 MDCM Elective (6)	Film & Theatre (6) Film & Theatre (6)	Media Forms (6) Advanced Media Production (6) Multimedia Production in Industry Contexts (6)	General Education (3) General Education (3)
Total required for BA (Media and Communications) - 144 units of credit	Major Sequence, 42 units of credit	Media and Communications core program, 48 units of credit	

Program Objectives and Learning Outcomes

The Bachelor of Arts (Dance) Bachelor of Education is a professional double degree which qualifies successful graduates to be recognised as high school teachers with the NSW Department of Education and Training. The double degree also serves as an ideal basis from which to enter a range of dance and dance education professions.

Program Structure

To qualify for the award of the Bachelor of Arts(Dance) Bachelor of Education, students must complete courses to the value of at least 192 units of credit, including:

- the relevant sequences in Dance Theory, Dance Practice, Dance Education and Education as prescribed by the School of Media, Film and Theatre for the BA(Dance) BEd degree.
- at least 42 units of credit drawn from the following major sequences (**List E**) offered within the BA degree:

Chinese, Drama (Theatre), Economics/Business Studies, English, French, Geography, German, History, Indonesian, Japanese, Literacy/English as a Second Language (ESL), Spanish.

This major sequence functions as the students' second teaching area. Students are strongly advised to familiarise themselves with the Department of School Education's current pattern of employment prospects when choosing both their second teaching area and the elective courses within that program.

- 12 units of credit in courses approved by the Faculty in the University's General Education program.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

- the approved sequences in Dance Theory, Dance Practice, Dance Education and Education;
- a sequence of 42 units of credit from List E below, including no more than 12 Level 1;
- 12 units of credit from the General Education program, normally taken in the second and third year of study.

List E CHIN Chinese, ENGL English*, ECON Economics, FREN French, GEOH/GEOS Geography, GERS German, HIST History, INDO Indonesian, JAPN Japanese, LING Linguistics, MEFT Theatre & Performance Studies, SPAN Spanish

* A major sequence in ENGL English is the most appropriate background for Literacy/ESL teaching.

- The Pass degree of Bachelor of Arts (Dance) Bachelor of Education may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

- have obtained 192 units of credit in accordance with 1.-3. above and satisfied the appropriate prerequisites for entry to the Honours level program;
- obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may apply to graduate with the Pass degree.

Admission Requirements

Entry to the BA(Dance) BEd program is by audition, satisfactory physiotherapy report, and satisfactory University academic entry requirements.

Bachelor of Arts (Dance) Bachelor of Education - Sample Program											
Year	Dance Practice	UOC	Dance Theory	UOC	Education & Dance Education	UOC	Second Teaching Subject	UOC	General Education	UOC	Total
1	DANC1001 DANC1002	6 6			DANC1101 DANC1102 EDST1101 EDST1103	6 6 6 6	ST Course ST Course	6 6			48
2	DANC2103 DANC2104	6 6	DANC2000 DANC2002 DANC2005	6 6 6			ST Course ST Course	6 6	Gen Ed Course Gen Ed Course	3 3	48
3	DANC2105 DANC2106	6 6	DANC2014 DANC2007	6 6	DANC2201	6	ST Course ST Course	6 6	Gen Ed Course Gen Ed Course	3 3	48
4	DANC2107	6			DANC2209 DANC2211 DANC2203 EDST4093 EDST4095 EDST4081	3 3 12 3 3 6	ST Course EDST Method EDST Method	6 3 3			48
Total		42		30		60		48		12	192

For more information, please refer to the School website: <http://media.arts.unsw.edu.au/dance/index.html>

3417 Diploma in Languages

DipLang

Typical Duration
3 years

Minimum UOC for Award
42 units of credit

Typical UOC per Session
6 units of credit

Program Description

The Diploma in Languages requires a program of 42 units of credit in a language and related courses as approved by the School of Modern Language Studies. It may be taken concurrently with another degree program, and offers an ideal opportunity to acquire an additional language for professional purposes.

Program Objectives and Learning Outcomes

The Diploma in Languages allows students to undertake a major from the languages and related studies offered by the School of Modern Language Studies, without having to enrol in a full BA degree.

Languages offered are Chinese, French, German, Indonesian, Japanese, Korean, Greek, Russian and Spanish.

Program Structure

The basic requirements for the award of the Diploma in Languages are:

1. Over a period of at least two semesters of study, 42 units of credit in language or related courses offered within the Bachelor of Arts (program 3400) as approved by the School of Modern Language Studies.

Academic Rules

1. To qualify for the award of the Diploma in Languages, students must complete, over a period of at least two semesters of study, 42 units of credit in language or related courses offered within the Bachelor of Arts (program 3400) as approved by the School of Modern Language Studies. Graduates must have achieved a minimum level of competence in the relevant language equivalent to that attained by students who have completed six semesters of study in a language commencing at Introductory Level.

2. A candidate for the Diploma shall:

- (i) have been awarded the Bachelor from the University of New South Wales or another tertiary institution, or
- (ii) with the approval of the program authorities concerned, be enrolled concurrently within the University of New South Wales in an undergraduate program of the University of New South Wales which does not offer a major sequence in the language concerned.

Admission Requirements

To be eligible to enrol in the Diploma program, students must already hold a tertiary degree or currently be enrolled in a degree program at UNSW.

3418 Diploma in Music

DipMus

Typical Duration
3 years

Minimum UOC for Award
42 units of credit

Typical UOC per Session
6 units of credit

Program Description

The Diploma in Music requires a program of 42 units of credit in Music, corresponding to a major in the Bachelor of Arts. The program provides a thorough training in Musicology, Musicianship skills and performance in an ensemble.

Program Objectives and Learning Outcomes

The objective of the Diploma is to provide a pathway for those wishing to gain a major in Music, following or in conjunction with another program.

Program Structure

The basic requirements for the award of the Diploma in Music are:

1. The completion of a sequence of courses totalling 42 units of credit and constituting the prescribed major sequence in Music of the Bachelor of Arts. Please refer to plan **MUSCA13400** in the Online Handbook.

Academic Rules

1. To qualify for the award of the Diploma in Music, students must complete a sequence of courses totalling 42 units of credit and constituting the prescribed major sequence in Music of the Bachelor of Arts (program 3400).

2. A candidate for the Diploma shall:

(i) have been awarded the Bachelor from the University of New South Wales or another tertiary institution, or

(ii) with the approval of the program authorities concerned, be enrolled concurrently within the University of New South Wales in an undergraduate program of the University of New South Wales which does not offer a major sequence in Music.

3420 Bachelor of Social Science

BSocSc

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Social Science degree combines a core program of study in social science, policy analysis and research methods with a major in a particular social science discipline.

Program Objectives and Learning Outcomes

The Bachelor of Social Science core program aims to provide students with skills in undertaking social research, particularly in an applied policy setting. These include written communication skills with particular emphasis on reports, submissions, position papers and proposals; the ability to undertake research and data analysis, both quantitative and qualitative; analysis and critical evaluation of research, arguments and policies; and the use of computers in social research and information processing.

The major study aims to equip students with a knowledge base in one of the social sciences.

Program Structure

The basic requirements for the degree are:

1. a total of 144 units of credit.

2. 48 units of credit in the core courses of the BSocSc degree program, each of which carries 6 units of credit:

First Year

SLSP1001 Research & Information Management

and one of the following:

SLSP1000 Social Science & Policy

SLSP1002 Introduction to Policy Analysis

Second Year

SLSP2000 Political Economy & the State

SLSP2001 Applied Social Research 1

SLSP2002 Policy Analysis Case Studies

Bachelor of Social Science - Sample Program - Example Only				
YEAR ONE				
48 units of credit				
S1	Philosophy (6)			
S2	Philosophy (6)			
YEAR TWO				
48 units of credit				
S1	Philosophy (6)	Political Economy and the State (6) Applied Social Research 1 (6) Policy Analysis Case Studies (6)	History & Philosophy of Science (6) History & Philosophy of Science (6)	
S2	General Education (3) General Education (3)			
YEAR THREE				
48 units of credit				
S1	Economic History (6)			
S2	General Education (3) General Education (3)	Social Theory & Policy Analysis (6) Applied Social Research 2 (6) Social Science & Policy Project (6)	History & Philosophy of Science (6) History & Philosophy of Science (6) History & Philosophy of Science (6)	
Total required for BSocSc Pass Degree - 144 units of credit		BSocSc Core Program, 48 units of credit	Major Sequence, 42 units of credit	

Third Year

SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science & Policy Project

The Social Science and Policy core program satisfies the University's requirement for 56 hours of study relating to the purposes and consequences of university education, professional and ethical action, and social responsibility.

3. a major sequence (**List F**) in one of the following:

AUST	Australian Studies
COMD	Development Studies Environmental Studies
ECON	Economics/Economic History
EURO	European Studies
GEOH/GEOS	Geography and Geology
HIST	History
HPSC	History and Philosophy of Science
MEFT	Film/Theatre & Performance Studies
MGMT	International Business/Industrial Relations/Human Resource Management
PECO	Political Economy
PHIL	Philosophy
POLS	Politics and International Relations
PSYC	Psychology
SOCA	Sociology and Anthropology
SPAN	Spanish and Latin American Studies (History Stream)
WOMS	Women's and Gender Studies

Students who major in Film and Theatre must also complete a sequence of 24 units of credit in a discipline listed in 3. above.

A major sequence is an approved progression of courses in a school or program: you will find details under the relevant entry.

4. 48 units of credit obtained in Level 1 (first year) courses, including the two core courses, the first year courses of your major sequence and two other electives.

5. during their second and third years of study, students are also required to complete courses from the University's General Education program carrying the equivalent of 12 units of credit.

How to Choose Your First Year Program

Enrol in the core courses SLSP1001 and either SLSP1000 or SLSP1002 (see 2. above); then choose one area from the list in point 3. which you would like to major in, and enrol in the appropriate first year (Level 1) courses. Then select additional courses to make up a total of 48 units of credit. 24 Level 1 units of credit must be selected from courses offered by the Faculty.

Upper Level and Honours Entry

In second and third year, enrol in the prescribed core courses (see 2. above) and the necessary courses for your major sequence. The additional units of credit should be taken either in the area you chose as a possible second major or in other Upper Level courses. You must also enrol in the prescribed courses from the University's General Education program. Try to spread your workload evenly over the four sessions of study.

In addition, if you intend to apply for entry to the Honours year, you should enrol in SLSP3911 Inquiry and Interpretation in the Social Sciences in your third year of study.

For entry to Honours in the BSocSc degree Program, you must have obtained an average of credit or better in your core program and major sequence; and a credit or above in SLSP3911. You have to apply to the Head of School for admission.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program, normally during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Academic Rules**Pass Degree**

To qualify for the award of the degree at Pass level, a student must obtain, normally over three years of study, a minimum of 144 units of credit in approved courses including:

1. the core program (48 units) in SLSP Social Science and Policy;
2. a major sequence from **List F** below;

3. a total of 48 Level 1 units of credit, including no more than 12 in any one sequence of study, from Lists A, B and C of the BA Rules;

4. at least 24 Level 1 units of credit, including 12 in SLSP, from Lists A and B of the BA Rules;

5. 12 units of credit from the General Education program, normally taken in the second and third year of study

List F AUST Australian Studies, COMD Development Studies, ECON Economics/Economic History, Environmental Studies, EURO European Studies, GEOH/GEOS Geography/Geology, HIST History, HPSC History and Philosophy of Science, MEFT Film/Theatre & Performance Studies, MGMT International Business/Industrial Relations/Human Resource Management, PECO Political Economy, PHIL Philosophy, POLS Politics and International Relations, PSYC Psychology, SOCA Sociology and Anthropology, SPAN Spanish and Latin American Studies (history stream), WOMS Women's and Gender Studies.

Students who major in Film or Theatre & Performance Studies must complete at least 24 units of credit in other sequences from List F.

6. The Pass degree of Bachelor of Social Science may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

7. have obtained 144 units of credit in accordance with 1.-5. above and satisfied the appropriate prerequisites for entry to the Honours level program;

8. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

3422 Bachelor of Social Science in Criminology**BSocSc****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Social Science in Criminology combines core studies in social science with core studies in criminal law, criminal procedures and criminal justice institutions; theories of crime; research in crime and justice, and electives in other criminological topics. The core sequence in social science includes courses in social and economic theory and policy, case studies in policy analysis, research methods and statistical applications, and social science research projects.

Program Objectives and Learning Outcomes

The Bachelor of Social Science in Criminology program gives students the skills to apply the social sciences to criminological problems. The program will provide students with a coherent program of knowledge about crime, its causes and social construction, the history and operation of crime control institutions, and the outcomes of criminal justice policies.

Program Structure

The basic requirements of the degree are:

1. a total of 144 units of credit.
2. 48 units of credit in the core courses of the BSocSc degree program and 24 units of credit in core courses in Criminology:

First Year

CRIM1000	Criminal Law and Justice 1
CRIM1001	Criminal Law and Justice 2
SLSP1000	Social Science & Policy
SLSP1001	Research & Information Management

Second Year

CRIM2000	Criminological Theories
SLSP2000	Political Economy & the State

SLSP2001	Applied Social Research 1
SLSP2002	Policy Analysis Case Studies

Third Year

CRIM3000	Researching Crime and Justice
SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science & Policy Project

The Social Science and Policy core program satisfies the University's requirement for 56 hours of study relating to the purposes and consequences of university education, professional and ethical action, and social responsibility.

3. 24 units of credit in the approved list of criminology-related electives (an indicative list) below:

CRIM2010	Community Corrections
CRIM2011	Crime & Society
CRIM2012	Crime Prevention Policy
CRIM2013	Juvenile Justice
CRIM2014	Policing
CRIM2015	Sentencing: Law, Policy & Practice
CRIM2016	Criminal Justice System
CRIM2017	The 'New' Prosecutors
CRIM2018	Crime, Power and Human Rights
CRIM3010	Comparative Criminal Justice
ENGL2480	Crime Fiction
HIST2468	History from Crime
POLS2020	Sex, Human Rights & Justice
PSYC3301	Psychology and Law
SLSP2820	Crime & Punishment
SOC2208	Deviant Fieldwork
SOC3103	Professions
SOC3408	Crime in Australian Society
SOC3409	Crime, Gender and Sexuality
SOC3410	Deviance
SOC3411	Forensic Sociology
SOC3701	Discipline of the Law
SOC3710	Moral Panics
SOC3810	The Space of Terror

4. 48 units of credit obtained in Level 1 (first year) courses, including SLSP1000, SLSP1001, CRIM1000 and CRIM1001. No more than 12 units of credit can be obtained in first year courses from any one school, department, unit or program.

5. 12 units of credit from the University's General Education program, normally during the second and third years of study.

How to Choose Your First Year Program

Enrol in the core courses CRIM1000, CRIM1001, SLSP1000 and SLSP1001; then select additional courses to make up a total of 48 units of credit. 24 Level 1 units of credit must be selected from courses offered by the Faculty.

Upper Level and Honours Entry

In second and third year, enrol in the prescribed core courses (see 2. above) and the 24 units of credit in the approved list of criminology-related electives. The additional units of credit should be taken in other Upper Level courses. You must also enrol in the prescribed courses from the University's General Education program. Try to spread your workload evenly over the four sessions of study.

In addition, if you intend to apply for entry to the Honours year, you should enrol in SLSP3911 Inquiry and Interpretation in the Social Sciences your third year of study.

For entry to Honours in the BSocSc Criminology degree Program, you must have obtained an average of credit or better in your core program and criminology electives; and a credit or above in SLSP3911. You have to apply to the Head of School for admission.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program, normally during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Academic Rules**Pass Degree**

To qualify for the award of degree at Pass level, a student must obtain, normally over three years of study, a minimum of 144 units of credit in approved courses including:

1. the core program (48 units) in SLSP Social Science and Policy;
2. the core courses (24 units) in CRIM Criminology;
3. 24 units of credit in the approved list of criminology-related elective courses;
4. a total of 48 Level 1 units of credit, including no more than 12 in any one sequence of study, from Lists A, B or C of the BA Rules;
5. 12 units of credit from the General Education program, normally taken in the second and third year of study;
6. The Pass degree of Bachelor of Social Science in Criminology may be awarded with Distinction where a candidate has achieved a weighted

Bachelor of Social Science in Criminology - Sample Program - Example Only					
Year	S1/S2	Social Science	Criminology	Other	UOC
1	1	SLSP1000 Social Science & Policy	CRIM1000 Criminal Law and Justice 1	HIST1003 The Fatal Shore (recommended) Elective	48
	2	SLSP1001 Research & Information Mngt	CRIM1001 Criminal Law and Justice 2	Elective Elective	
2	1	SLSP2000 Political Economy & the State SLSP2001 Applied Social Research 1	CRIM2000 Criminology Theories Criminology Elective I		48
	2	SLSP2002 Policy Analysis Case Studies	Criminology Elective II	General Education x2 Elective	
3	1	SLSP3000 Social Theory & Policy Analysis SLSP3001 Applied Social Research 2	CRIM3000 Researching Crime and Justice	Elective	48
	2	SLSP3002 Social Science & Policy Project	Criminology Elective III Criminology Elective IV	General Education x2	
Total UOC		48	48	48	144

average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

7. have obtained 144 units of credit in accordance with 1.-5. above and satisfied the appropriate prerequisites for entry to the Honours level program;

8. obtained a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

3424 Bachelor of International Studies

BInSt

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of International Studies is a four-year full-time degree program offered in the following five area-study concentrations: Asian Studies Plan, Development Studies Plan, European Studies Plan, Global Studies Plan, Language Studies Plan.

Program Objectives and Learning Outcomes

International Studies provides the knowledge and skills essential for understanding and working in the rapidly changing global environment. It examines the interactions of nations, economies, institutions, peoples, cultures, technologies and ideas against a background of increasing international integration and changing modernity. The program provides specialised sequences of courses in five area streams which are designed to give students a thorough preparation for further study and employment in areas vital to Australia's increasing participation in the international arena. The degree incorporates a period of overseas study during the third and fourth year for students who have made satisfactory progress towards the degree in their first and second years of study. The Faculty provides a contribution to the expenses of this study.

Program Structure

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses. The program includes a core sequence of courses in International Studies (INST) and an approved program (Overseas Study Program) at an overseas institution normally of two semesters, undertaken during the third and fourth years of study.

To proceed on the Overseas Study Program, students must have achieved satisfactory academic progress in their first and second years of study and must fulfill the requirements of the University's Exchange Program.

ASIAA13424 Asian Studies Plan

Coordinator: Karyn Lai, School of Philosophy

The Bachelor of International Studies specialising in Asian Studies is an integrated program combining language study, a core program of study in International Studies, and a core program in Asia-related study, together with an approved overseas program to be undertaken during the third and fourth years of study.

The study of Asian societies and Asian languages is increasingly important for Australia. Australia is located in the Asian region, most of its trade is with Asia and Asian countries are becoming important sources of investment in Australia. They are also becoming important areas of investment by Australian companies. Australia's future lies in increasing social, economic and political interaction with Asian countries.

Graduates who combine proficiency in an Asian language and knowledge of one or more Asian countries with a professional qualification will be in increasing demand with both private and public employers.

Enquiries may be directed to the Coordinator listed above.

COMDB13424 Development Studies Plan

Coordinator: Michael Johnson, School of Social Science and Policy

In many parts of the developing world large numbers of people live in poverty and the natural environment is under pressure, making it difficult to access clean water, energy sources and natural materials for housing and other uses. Understanding these and other related global trends and how they can be addressed is the concern of the Development Studies Plan, an interdisciplinary program that introduces students to the field of development studies. Central issues and themes in Development Studies examined in the program include the history and political economy of development; the causes of poverty and inequality; the relationship between the environment and economic development; the problems that confront remedial efforts at local, state and international levels; social, economic, environmental and political institution-building and the debate about globalisation and development.

The Bachelor of International Studies in Development Studies requires the completion of a sequence of courses in Development Studies and a core sequence of courses in International Studies, together with an approved overseas program undertaken during the third or fourth year of study. There is scope in the degree for students to study a language in depth. Courses in the Bachelor of International Studies in Development Studies are offered at all levels; they are taught in English and require no previous knowledge of other languages.

Enquiries may be directed to the Coordinator listed above.

EUROA13424 European Studies Plan

Coordinator: Centre for European Studies

Studying Europe is an essential part of defining Australia's role as a predominantly 'European' country located in the Asia-Pacific. Any attempt

Bachelor of International Studies in Asian Studies - Sample Program									
Year	INST	UOC	ASIA	UOC	Language	UOC	Electives	UOC	Total
1/I	INST1300	6	ASIA1002	6	JAPN	6	ENGL	6	48
1/II	INST1400	6	ASIA1001	6	JAPN	6	ENGL	6	
2/I	INST2300	6	ASIA	6	JAPN	6	Gen Ed	6	48
2/II	INST2200	6	ASIA	6	JAPN	6	Gen Ed	6	
3/I	INST2400 INST3300	6 6	ASIA	6	JAPN	6			24
3/II	Individual Study (Overseas) Program A INST3101							24	24
4/I	Individual Study (Overseas) Program B INST3102							24	24
4/II	INST3900	6	ASIA	6	JAPN	6	ARTS	6	24
Total		42		36		36		78	192

Bachelor of International Studies in Development Studies - Sample Program									
Year	INST	UOC	COMD	UOC	Lang/Electives	UOC	Electives	UOC	Total
1/I	INST1300	6	COMD1001	6	Language	6	HIST	6	48
1/II	INST1400	6	COMD1002	6	Language	6	HIST	6	
2/I	INST2300	6	COMD2000	6	Language	6	Gen Ed	6	48
2/II	INST2200	6	COMD2050	6	Language	6	Gen Ed	6	
3/I	INST2400	6	SOCA3104	6	Language	6			24
	INST3301	6							
3/II	Individual Study (Overseas) Program A						INST3101	24	24
4/I	Individual Study (Overseas) Program B						INST3102	24	24
4/II	INST3900	6	ECON3110	6			ARTS	6	24
			SOCA3211	6					
Total		42		42		30		78	192

to define Australian identity must be based not only on a new relationship with our neighbours, but on a critical understanding of our European heritage and the continuing dialogue with European thought and practice. The momentous changes, which are taking place in Eastern and Western Europe, will have an extraordinary impact on world developments over the next years, and on the part Australia will play in them.

The Bachelor of International Studies specialising in European Studies requires completion of a core European Studies program, three years' study of a European language, and completion of a core program of courses in International Studies, together with an approved overseas program to be undertaken during the third and fourth years of study. EURO courses are designed to provide an interdisciplinary European context which addresses basic issues and problems in the study of European culture and society, seen from the perspective of current attempts to establish a new role for a united Europe.

They focus both on the enormous contribution of the European Enlightenment to our concepts of freedom, humanity and citizenship, and its troubled relationship to the realities of European world domination and power politics. The "New Europe" has become an economic power second only to the United States; will it be able to resolve these dilemmas, and regain some kind of moral and political leadership in world affairs as well? We can learn much from both Europe's failures and its achievements, especially the astonishing success of European integration in overcoming centuries-old hostilities, and its development of new political structures more appropriate to representing cultural diversity within a rapidly globalising economy.

Enquiries may be directed to the International Studies Program Office.

GLSTA13424 Global Studies Plan

Coordinator: Roger Bell, International Studies

Globalisation has emerged as a defining trend of the early twenty-first century. This program addresses the main themes and debates

that relate to globalisation. It locates this process in relation to world history, international relations, international political economy, global development and large-scale social change. Questions about the rising levels of inequality world-wide, the environment, the changing role of nation-states and the nation-state system, the relationship between globalisation and transnational corporations (TNCs), the growing power of international institutions and organisations, and the significance of technological change will be examined. The relationship between globalisation and national identity will also be explored as will the wider social and cultural significance of recent international changes.

The Bachelor of International Studies specialising in Global Studies requires the completion of a sequence of courses in Global Studies and a core sequence of courses in International Studies, together with an approved overseas program to be undertaken during the third or fourth year of study. There is scope in the degree for students to study a language in depth. Courses in the Bachelor of International Studies in Globalisation are offered at all levels; they are taught in English and require no previous knowledge of other languages.

Enquiries may be directed to the Coordinator listed above.

MODLA13424 Language Studies Plan

Coordinator: Carmen Cabot, School of Modern Language Studies

Australia's position in the world requires us to communicate in an informed manner with our neighbours and trading partners. We also have a rich heritage from the diverse cultures from which we have come. This continues to influence our experience of the world and represents a considerable resource in Australia's current efforts to 'internationalise' its economic and cultural systems. Genuine proficiency in other languages not only greatly expands personal horizons, but also enhances later opportunities for overseas study and employment.

The Bachelor of International Studies specialising in Language Studies is designed for students wishing to prepare themselves for a professional

Bachelor of International Studies in European Studies - Sample Program									
Year	INST	UOC	EURO	UOC	Language	UOC	Electives	UOC	Total
1/I	INST1300	6	EURO1000	6	SPAN	6	HIST	6	48
1/II	INST1400	6	EURO1001	6	SPAN	6	HIST	6	
2/I	INST2300	6	EURO	6	SPAN	6	Gen Ed	6	48
2/II	INST2200	6	EURO	6	SPAN	6	Gen Ed	6	
3/I	INST2400	6	EURO	6	SPAN	6			24
	INST3301	6							
3/II	Individual Study (Overseas) Program A						INST3101	24	24
4/I	Individual Study (Overseas) Program B						INST3102	24	24
4/II	INST3900	6	EURO	6	SPAN	6	ARTS	6	24
Total		42		36		36		78	192

Bachelor of International Studies in Global Studies - Sample Program									
Year	INST	UOC	GLST	UOC	Language/ Elective	UOC	Electives	UOC	Total
1/I	INST1300	6	GLST1100	6	INDO	6	ENGL	6	48
1/II	INST1400	6	PECO1001	6	INDO	6	ENGL	6	
2/I	INST2300	6	GLST2104	6	INDO	6	Gen Ed	6	48
2/II	INST2200	6	GLST2105	6	INDO	6	Gen Ed	6	
3/I	INST2400 INST3301	6 6	SOCA3104	6	SOCA	6			24
3/II	Individual Study (Overseas) Program A					INST3101		24	
4/I	Individual Study (Overseas) Program B					INST3102		24	24
4/II	INST3900	6	GLST3000	6			ARTS	6	24
			SOCA3211	6					
Total		42		42		30		78	192

career in the languages area, in Australia or overseas. It requires major sequences in two languages other than English, with the opportunity to acquire real fluency and competence through the overseas study period prescribed for the degree. Both within the language majors themselves, and in the courses offered in International Studies, students will acquire a thorough understanding of the social and cultural contexts in which their chosen languages are used, and be ideally equipped to be articulate communicators and representatives for Australia overseas.

Enquiries may be directed to the Coordinator listed above.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Academic Rules

Asian Studies Plan (ASIAA13424)

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

- 48 units of credit at Level 1, including no more than 12 in any one area of study;
- a major sequence of 42 units of credit from the core program in International Studies;
- a sequence of 36 units of credit in one of the following Asian languages: CHIN Chinese, INDO Indonesian, JAPN Japanese, KORE Korean;

- at least 36 units of credit in **Asia-related** courses, including **ASIA1001** and **ASIA1002** at Level 1:

ASIA1001	Introduction to Contemporary Asia
ASIA1002	Introducing Southeast Asia
ECON2116	Economics of Japanese Business and Government
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
HIST2050	Women in Southeast Asian Societies
HIST2054	Modern Japan: Political Culture, Popular Culture
HIST2055	Modern India
HIST2084	The Vietnam War/The American War
HIST2085	Australia's Asian Context: Resistance and Engagement
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia
HIST2351	Chinese Civilisation, 1600 BC to 1600 AD
HPSC2550	Sustainable Development, Globalisation and the Third World
PHIL2519	Introduction to Chinese Philosophy
PHIL2520	Aspects of Chinese Thought
POLS2003	The Political Development of Contemporary China
POLS2014	Regional Cooperation and Conflict in Southeast Asia
POLS2036	Political Development in Northeast Asia
SOCA2035	Modern Southeast Asia: Society and Culture
SPAN2430	Miracles of Modernisation/Crises of Capitalism: Asia and the Americas

or approved courses in CHIN, INDO, JAPN, and KORE.

- 48 units of credit at an approved overseas university over two sessions (INST3101 and INST3102);

Bachelor of International Studies in Languages - Sample Program									
Year	INST	UOC	LANG1	UOC	LANG2	UOC	Electives	UOC	Total
1/I	INST1100	6	CHIN	6	INDO	6	HIST	6	48
1/II	INST1400	6	CHIN	6	INDO	6	HIST	6	
2/I	INST2300	6	CHIN	6	INDO	6	Gen Ed	6	48
2/II	INST2200	6	CHIN	6	INDO	6	Gen Ed	6	
3/I	INST2400 INST3301	6 6	CHIN	6	INDO	6			24
3/II	Individual Study (Overseas) Program A					INST3101		24	
4/I	Individual Study (Overseas) Program B					INST3102		24	24
4/II	INST3900	6	CHIN	6	INDO	6	ARTS	6	24
Total		42		36		36		78	192

6. 6 units of credit in an Upper Level ARTS course;
7. 12 units of credit from the University's General Education program at Upper Level;
8. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

9. have obtained 192 units of credit in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program;
10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions, and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Development Studies Plan (COMDB13424)

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. 48 units of credit at level 1, including no more than 12 in any one area of study;
2. a major sequence of 42 units of credit from the core program in International Studies;
3. a sequence of 36 units of credit in **Development Studies (COMD)** including **COMD1002**, **COMD2000**, **COMD2050** and **ECON3110**:

COMD1001	Development Studies: The Emergence of Underdevelopment
COMD1002	Development Studies: Poor World, Rich World
COMD2000	The Theory and Practice of Development
COMD2010	(Un)Making the Third World: History and Global Development B
COMD2050	Sustainable Development, Globalisation and the Third World
ARTS2000	Arts and Social Sciences Internship
ECON3109	Economic Growth, Technology and Structural Change
ECON3110	Development Economics
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia
POLS2023	Globalisation and Uneven Development
SOCA2210	Anthropology of Human Rights
SOCA3104	Global Migrations, Global Refugees
SOCA3106	Anthropology and Tourism
SOCA3204	Modernity and Development in the Pacific Islands
SOCA3211	Development and Modernity
SOCA3212	Environment, Society and Culture
SOCA3810	The Space of Terror
SPAN3401	Colonising the Americas: The Spanish and Portuguese Empires

4. 48 units of credit at an approved overseas university over two sessions (INST3101 and INST3102);
5. a sequence of language study (normally of 24 units of credit);
6. 6 units of credit in an Upper Level ARTS course;
7. 12 units of credit from the University's General Education program at Upper Level;
8. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

9. have obtained 192 units of credit in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program;
10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions, and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

European Studies Plan (EUROA13424)

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. 48 units of credit at Level 1, including no more than 12 in any one area of study;
2. a major sequence of 42 units of credit from the core program in International Studies;
3. a sequence of 36 units of credit in **European Studies (EURO)**, including **EURO1000** and **EURO1001** at Level 1:

EURO1000	New Europe A
EURO1001	New Europe B
EURO2000	Concepts of Europe
EURO2001	Gender, Race, Nature and Reason
EURO2002	Experience of the City
EURO2003	European Modernism
EURO2103	The Italian Renaissance
EURO2107	Journeys with Love and Death
EURO2201	Text Workshop A
EURO2300	The German-Jewish Experience
EURO2301	The Attractions of Fascism
EURO2302	The Messiah Complex
EURO2311	The Attractions of Communism
EURO2321	German Revolutions?
EURO2331	Understanding Nazi Germany
EURO2401	Modern Italy
EURO2410	Nineteenth Century Europe
EURO2411	Modern Spain
EURO2433	The Russian Revolution
EURO2470	Modern France
EURO2482	Dark Continent? Europe 1914-45
EURO2483	Decadence, Dada and All that Jazz
EURO2500	The Russian Experience
EURO2504	Thatcher, Blair and Beyond
EURO2600	European Integration
EURO2700	What is Postcommunism?
EURO3000	Evidence and Interpretation
EURO3001	Barbarians, Peasants and Vampires
EURO3900	Advanced Program A
EURO3901	Advanced Program B

4. a sequence of at least 36 units of credit in one of the following European languages: FREN French, GERS German, GREK Greek, ITAL Italian, RUSS Russian, SPAN Spanish;

5. 6 units of credit in an Upper Level ARTS course;
6. 48 units of credit at an approved overseas university over two sessions (INST3101 and INST3102);
7. 12 units of credit from the University's General Education program at Upper Level;
8. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

9. have obtained 192 units of credit in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program;
10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions, and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Global Studies Plan (GLSTA13424)

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. 48 units of credit at level 1, including no more than 12 in any one area of study;
2. a major sequence of 42 units of credit from the core program in International Studies;
3. a sequence of 36 units of credit in **Global Studies (GLST)** including **GLST1100**, **GLST2104** and **GLST3000**:

GLST1100	Introduction to Globalisation
GLST1200	Women, Gender and World History
GLST2101	(Un)Making the Third World: History and Global Development B
GLST2102	(Un)Making the Third World: History and Global Development A

GLST2103	The United States and Changing Global Orders
GLST2104	Globalisation and Uneven Development
GLST2105	Theories and Concepts of International Relations
GLST3000	Global Studies and Global Transformations
GLST3302	States, Nations and Ethnic Identities
ECON2111	Globalisation
EURO2600	European Integration
EURO2700	What is Post-Communism?
GEOH1601	Australia and Global Geographies: Integration and Convergence

GEOH3661	Cities and Urbanisation
HIST2085	Australia's Asian Context
MEFT2100	Global Media: Markets, Flows and Cultures
MEFT3205	Cinemas and Cultures
PECO1001	Australia in the Global Economy
POLS2014	Regional Cooperation and Conflict in Southeast Asia
POLS3050	Theories of Nationalism
SOCA1001	Cultural Identities
SOCA2101	Encountering Modernity
SOCA2210	Anthropology of Human Rights
SOCA3104	Global Migration, Global Refugees
SOCA3106	Anthropology and Tourism
SOCA3703	Nationalism, Citizenship and Cultural Identity
SOCA3801	The Space of Terror

4. 48 units of credit at an approved overseas university over two sessions (INST3101 and INST3102);

5. a sequence of language study (normally of 24 units of credit);

6. 6 units of credit in an Upper Level ARTS course;

7. 12 units of credit from the University's General Education program at Upper Level;

8. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

9. have obtained 192 units of credit in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program;

10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions, and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Language Studies Plan (MODLA13424)

To qualify for the award of the degree, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. 48 units of credit at Level 1, including no more than 12 in any one area of study;

2. a major sequence of 42 units of credit from the core program in International Studies;

3. two sequences of language study in each of at least 36 units of credit from the following: CHIN Chinese, FREN French, GERS German, GREK Greek, INDO Indonesian, ITAL Italian, JAPN Japanese, KORE Korean, RUSS Russian, SPAN Spanish;

4. 48 units of credit at an approved overseas university over two sessions (INST3101 and INST3102);

5. 6 units of credit in an Upper Level ARTS course;

6. 12 units of credit from the University's General Education program at Upper Level;

7. The Pass degree of Bachelor of International Studies may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

8. have obtained 192 units of credit in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program;

9. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions, and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

3425 Bachelor of Music

BMus

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Music program is a three-year specialist music degree which enables students to develop their musicianship and their musical skills. Students undertake studies in musicology and ethnomusicology - including music history, style, musical perception and analysis, music in its cultural contexts - and musical technology, performance, jazz studies and composition. At the same time, students have enough flexibility in their program to enable them to combine music studies with work in a related discipline such as theatre, languages, English or history. Consistently good work in the BMus may lead to a fourth (Honours) year of study.

Program Objectives and Learning Outcomes

The program enables students to develop skills and knowledge in music as preparation for professional work in areas as diverse as music performance, private teaching, broadcasting, recording, arts administration, concert planning, music and arts journalism, arranging and composition.

Program Structure

The three major sequences in the Bachelor of Music are in Musicology (30 units of credit), Musicianship (30 units of credit) and Professional Practices (36 units of credit). The Contextual Studies component requires the completion of courses totalling 36 units of credit from courses offered by the Faculty of Arts and Social Sciences and must include an Upper Level ARTS3000 course, if MUSC3101 is not included within the Musicology strand. The General Education component requires courses totalling 12 units of credit from the General Education program approved for students in the Faculty of Arts and Social Sciences.

The BMus (Pass) degree requires a total of 144 units of credit and the Honours degree a total of 192 units of credit.

Year 1

MUSC1101	Music Reinvented
MUSC1302	Musicianship A
MUSC1401	Professional Practices A
MUSC1402	Professional Practices B
First Year BA courses (24 units of credit)	

Year 2

MUSC2301	Musicianship B
MUSC2302	Musicianship C
MUSC2332	Electronic Music
MUSC2401	Professional Practices C
MUSC2402	Professional Practices D
Upper Level Musicology/Musicianship options (6 units of credit)	
Upper Level BA course (6 units of credit)	
General Education courses (6 units of credit)	

Year 3

MUSC3101	Professional and Ethical Practices in Music
MUSC3401	Advanced Professional Practices A
MUSC3402	Advanced Professional Practices B
Upper Level Musicology/Musicianship options (18 units of credit)	
An ARTS3000 course (6 units of credit) if MUSC3101 is not included in program	
General Education courses (6 units of credit)	

BMus Requirements

BMus students must take part in at least two of the performance ensembles offered by the School, one of which must be a major performing ensemble.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program, normally during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Bachelor of Music - Sample Program											
Year	Musicology	UOC	Musicianship	UOC	Professional Practices	UOC	Contextual Studies	UOC	General Education	UOC	Total
Year 1											
S1	MUSC1101	6			MUSC1401	6	BA x 2	12			24
S2			MUSC1302	6	MUSC1402	6	BA x 2	12			24
Year 2											
S1	Option	6	MUSC2301	6	MUSC2401	6	BA x 1	6			24
S2	Option	6	MUSC2302	6	MUSC2402	6			Gen Ed x 2	6	24
Year 3											
S1	MUSC3101	6	Option	6	MUSC3401	6	BA x 1	6			24
S2	Option	6	Option	6	MUSC3402	6			Gen Ed x 2	6	24
Total		30		30		36		36		12	144

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over three years of study, a minimum of 144 units of credit in approved courses including:

1. 96 units of credit in the relevant sequences in Musicology, Musicianship and Professional Practices;
2. an additional 24 Level 1 and 6 Upper Level units of credit from Lists A, B or C of the BA Rules, including no more than 12 Level 1 in any one sequence;
3. 12 units of credit from the General Education program, normally taken in the second and third year of study;
4. 6 units of credit from a third year ARTS elective or equivalent course.
5. The Pass degree of Bachelor of Music may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

6. have obtained 144 units of credit in accordance with 1.-4. above and satisfied the appropriate prerequisites for entry to the Honours level program;
7. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Musicology and Musicianship Options

MUSC2101	Music of the Baroque
MUSC2111	Introduction to Musicology
MUSC2112	Music of the 18th and 19th Centuries
MUSC2132	Music of the late Middle Ages and Renaissance
MUSC2201	Aboriginal Music
MUSC2332	Electronic Music
MUSC3101	Professional and Ethical Practices in Music
MUSC3112	Seminar in Music
MUSC3131	Jazz and Popular Music
MUSC3162	Twentieth Century Music
MUSC3212	Music of India
MUSC3301	Music Analysis
MUSC3302	Orchestration and Arrangement
MUSC3331	Advanced Electronic Music
MUSC4650	Conducting

Further Information

Admission to the program is subject to a satisfactory audition/interview and an acceptable level of attainment in year 12 studies or equivalent. Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

For more information, please refer to the School's website: <http://music.arts.unsw.edu.au/futurestudents/undergraduate.php>

3426 Bachelor of Music Bachelor of Education

BMusBED

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Music and Music Education offers a four-year full-time double degree for intending specialist music educators leading to the award of Bachelor of Music Bachelor of Education (BMusBED).

Program Objectives and Learning Outcomes

The BMusBED offers an integrated training in six major areas: Musicology, Musicianship, Music Education Studies, Performance Studies, Education Studies and Contextual Studies. Graduates are qualified to teach classroom and instrumental/vocal music from kindergarten to Year 12, and are accredited to teach in all Australian states.

Program Structure

To qualify for the Bachelor of Music, Bachelor of Education at Pass level, a student must obtain at least 192 units of credit normally taken from the six major components listed below:

1. Musicology and Musicianship (66 units of credit)

MUSC1101	Music Reinvented
MUSC1302	Musicianship A
MUSC2201	Aboriginal Music
MUSC2301	Musicianship B
MUSC2302	Musicianship C
MUSC2332	Electronic Music
3 Musicology Options (18 units of credit):	
MUSC3131	Jazz and Popular Music (highly recommended)
2 Musicianship electives (12 units of credit)	

2. Music Education (36 units of credit)

MUSC1601	Introduction to Music Education
MUSC2601	Introduction to Secondary Music Education
MUSC3601	Specialist Music Education
MUSC3602	Creativity in Music Education
MUSC4601	Advanced Music Education
MUSC4602	Music Teaching Experience

3. Performance Studies (36 units of credit)

MUSC1501	Music Performance 1A
MUSC1502	Music Performance 1B
MUSC2501	Music Performance 2A
MUSC2502	Music Performance 2B

Bachelor of Music Bachelor of Education - Sample Program															
Year	Musicology	UOC	Musicianship	UOC	Music Education	UOC	Performance Studies	UOC	Education Studies	UOC	Contextual Studies	UOC	General Education	UOC	Total
Year 1															
S1	MUSC1101	6			MUSC1601	6	MUSC1501	6	EDST x 1	6					24
S2			MUSC1302	6			MUSC1502	6	EDST x 1	6	BA x 1	6			24
Year 2															
S1	MUSC2201	6	MUSC2301	6	MUSC2601	6	MUSC2501	6							24
S2			MUSC2302	6			MUSC2502	6			BA x 1	6	Gen Ed x 2	6	24
Year 3															
S1	Option	6	Option	6	MUSC3601	6	MUSC3501	6							24
S2	MUSC2332	6			MUSC3602	6	MUSC3502	6			BA x 1	6			24
Year 4															
S1	MUSC3131	6	Option	6	MUSC4601	6			EDST x 2	6					24
S2			MUSC4650	6	MUSC4602	6			EDST x 1	6			Gen Ed x 2	6	24
Total		30		36		36		36		24		18		12	192

MUSC3501 Advanced Music Performance 3A

MUSC3502 Advanced Music Performance 3B

4. Education Studies (24 units of credit)

Four courses (each of 6 units of credit) selected from core and elective courses offered by the School of Education. The core courses EDST1101 Educational Psychology 1 and either EDST1103 Educational Psychology 2 or EDST1104 Social Perspectives in Education are prerequisites for an additional three electives (of 12 units of credit) offered by the School of Education. The Year 4 core courses, EDST4093 Special Education and EDST4095 Gifted and Talented Students: Recognition and Response are required for registration by the NSW Department of Education and Training. At the discretion of the Program Coordinator for Music Education, students may be permitted to substitute MUSC3612 Principles and Processes of Music Education (6 units of credit) for one of the two School of Education electives.

5. Contextual Studies (18 units of credit)

A choice of courses available from the Faculty of Arts and Social Sciences programs.

6. General Education (12 units of credit)

Courses totalling 12 units of credit from those approved for students in the Faculty of Arts and Social Sciences.

Program Requirements

The student's training involves practice teaching sessions in Years 1, 2, 3 and 4 in a variety of different schools.

Honours Level

Prerequisite: Completion of all requirements for the Pass degree with an average of at least credit level in either music (in the case of Honours in music) or music education (in the case of Honours in music education) courses.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. the relevant sequences in Music, Music Education, Education and Performance Studies;
2. an additional 6 Level 1 and 12 Upper level units of credit from Lists A, B or C of the BA Rules;
3. 12 units of credit from the General Education program, normally taken in the second and third year of study.
4. The Pass degree of Bachelor of Music Bachelor of Education may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

5. have obtained 192 units of credit in accordance with 1.-3. above and satisfied the appropriate prerequisites for entry to the Honours level program;

6. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Admission Requirements

Entry to the program is subject to a satisfactory audition/interview and acceptable level of attainment in Year 12 studies or equivalent. Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

For more information, please refer to the School's website: <http://music.arts.unsw.edu.au/futurestudents/undergraduate.php>

3427 Bachelor of Music Bachelor of Arts

BMus BA

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Music and Music Education offers a four-year double degree leading to the award of Bachelor of Music Bachelor of Arts. The BMusBA provides an opportunity for students to undertake all of the courses required for the Bachelor of Music degree, including the Music Performance stream, as well as 84 units of credit from the Bachelor of Arts degree, including an approved major of 42 units of credit.

Entry to the program is subject to a satisfactory audition/interview and acceptable level of attainment in Year 12 studies or equivalent.

Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

Program Objectives and Learning Outcomes

The Bachelor of Music/Bachelor of Arts develops the full range of music skills in the areas of musicology, ethnomusicology, performance, composition, music technology and jazz studies as well as the skills and perspectives provided by more extensive studies in other parts of the Faculty.

The whole range of professional careers open to BMus graduates is available to BMusBA graduates. In addition, the BA qualification offers opportunities in public and private sector administrative and policy positions.

Program Structure

The program is as follows:

Year 1

- MUSC1101 Music Reinvented
- MUSC1302 Musicianship A
- MUSC1401 Professional Practices A
- MUSC1402 Professional Practices B
- First year BA courses (24 units of credit)

Bachelor of Music Bachelor of Arts - Sample Program											
Year	Musicology	UOC	Musicianship	UOC	Professional Practices	UOC	Arts	UOC	General Education	UOC	Total
Year 1											
S1	MUSC1101	6			MUSC1401	6	BA x 2	12			24
S2			MUSC1302	6	MUSC1402	6	BA x 2	12			24
Year 2											
S1	Option	6	MUSC2301	6	MUSC2401	6	BA x 1	6			24
S2	Option	6	MUSC2302	6	MUSC2402	6	BA x1	6			24
Year 3											
S1			Option	6	MUSC3401	6	BA x 1	6	Gen Ed x 2	6	24
S2			Option	6	MUSC3402	6					24
Year 4											
S1	MUSC3101	6	Option	6			BA x 2	12			24
S2	Option	6					BA x 2	12	Gen Ed x 2	6	24
Total		30		36		36		78		12	192

Year 2

MUSC2301 Musicianship B
 MUSC2302 Musicianship C
 MUSC2401 Professional Practices C
 MUSC2402 Professional Practices D
 2 Upper Level Musicology Options (12 units of credit)
 2 Upper Level BA courses (12 units of credit)

Year 3

MUSC3401 Advanced Professional Practices A
 MUSC3402 Advanced Professional Practices B
 2 Upper Level Musicology Options (12 units of credit)
 Upper Level BA courses (18 units of credit)
 General Education courses (6 units of credit)

Year 4

Musicianship Option (6 units of credit)
 Musicology Option (6 units of credit)
 Either MUSC3101 Professional and Ethical Practices in Music or a course from the ARTS3000 series
 Upper Level BA courses (24 units of credit)
 General Education courses (6 units of credit)

BMus Requirements

BMus students must take part in at least two of the performance ensembles offered by the School, one of which must be a major performing ensemble.

BA Options

The BA courses must include one major sequence for the BA degree (List A) in addition to the Music major.

Academic Rules**Pass Degree**

To qualify for the award of the degree at Pass level, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. a total of 48 Level 1 units of credit;
2. no more than 12 Level 1 units of credit in any one sequence of study from Lists A, B or C of the BA Rules, other than MUSC courses;
3. 102 units of credit in the relevant sequences in Musicology, Musicianship and Professional Practices;
4. a major sequence (other than Music) of 42 units of credit from List A of the BA Rules;
5. 36 units of credit outside the major sequence in 4. above from Lists A, B or C of the BA Rules;

6. 12 units of credit from the General Education program, normally taken in the second and third year of study;

7. 6 units of credit from a third year ARTS elective or equivalent course.

8. The Pass degree of Bachelor of Music Bachelor of Arts may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

9. have obtained 192 units of credit in accordance with 1.-7. above and satisfied the appropriate prerequisites for entry to the Honours level program;

10. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

4031 Bachelor of Social Work**BSW****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Social Work offers a four-year degree leading to the award of Bachelor of Social Work (BSW). The BSW provides an opportunity for students to undertake core Social Work courses, which include studies in the areas of social work practice, social and behavioural sciences, and contextual studies.

Program Objectives and Learning Outcomes

The Bachelor of Social Work program requires four years of full-time study. It is designed to prepare students for the professional practice of social work including work in the wider field of welfare. The essence of social work is working with people, including individuals, couples, families, groups, organisations or communities, and this will span people of any age, from any walk of life, or from any ethnic or racial background.

Bachelor of Social Work - Sample Program											
Year	Practice	UOC	Human Behaviour	UOC	Society & Welfare Policies	UOC	Contextual Studies	UOC	General Education	UOC	Total
1	SOCW1001 SOCW1002	6 6	PSYC SOCW1003	6 6	SOCA	6	Elective Elective Elective	6 6 6			48
2	SOCW2003 SOCW2006	6 6	SOCW2001	6	SOCW2002 SOCW2004	6 6	SOCW2005 SOCW2100	6 6	Gen Ed Gen Ed	3 3	48
3	SOCW3002 SOCW3001 SOCW3008	6 12 6			SOCW3004	6	SOCW3006 Research Elective	6 6	Gen Ed Gen Ed	3 3	48
4	SOCW4002 SOCW4003 SOCW4010	6 6 24			SOCW4006	6	SOCW4004	6			48
Total		84		18		30		48		12	192

Program Structure

Year 1

SOCW1001 Introduction to Social Work
 SOCW1002 Communication and Social Work
 SOCW1003 Human Behaviour 1
 Psychology elective
 Sociology elective
 Level 1 Arts elective
 Level 1 Arts elective
 Level 1 Arts elective

Year 2

SOCW2001 Human Behaviour 2
 SOCW2002 Society and Social Work 1
 SOCW2003 Social Work Practice: Individuals, Families & Groups 1
 SOCW2004 Society and Social Work 2
 SOCW2005 Research for Social Work
 SOCW2006 Social Work Practice - Community Work
 SOCW2100 Aboriginal People and Social Work
 General Education course
 General Education course
 SOCW2007 Bridging (for students exempt from 1st year)

Year 3

SOCW3001 Social Work Practice - Third Year Practicum
 SOCW3002 Social Work Practice: Individuals, Families & Groups 2
 SOCW3004 Social Policy 1
 SOCW3006 Socio-Legal Practice
 SOCW3008 Social Work Practice
 Research elective
 General Education course
 General Education course

Year 4

SOCW4002 Social Work Practice in Organisations
 SOCW4003 Social Work Practice
 SOCW4004 Social Philosophy
 SOCW4006 Social Policy 2
 SOCW4010 Social Work Practice

Program Requirements - Field Education

An integral aspect of the program is organised learning in the field and this is a basic requirement for the professional recognition of the degree. In the field education courses, a field educator, usually in a social welfare agency, is responsible for a student learning to apply the principles of professional practice in an actual practice setting. From year 3, a total of 140 seven-hour days are taken up in this way. Forty of these days are scheduled during academic recess periods. A student's two field education placements are in more than one type of practice setting. The settings vary and can include medical, psychiatric, local government, community health, community, family and child welfare, services to groups with

disabilities, services to the aged, services to migrants, income security, and corrective services. Non-government social welfare agencies and all levels of government are utilised. For some students, their second field education placement may be located outside the Sydney metropolitan area.

General Education Requirements

Students are also required to complete 12 units of credit from the University's General Education program, normally during their second and third years of study. For further information, please refer to the General Education Requirements entry under Faculty Information and Assistance.

Honours

Students may graduate with Honours by enrolling in the Honours program in the third year of the degree. Students must complete SOCW3005 Research Honours in Year 3 and SOCW4006 Social Policy Honours in Year 4. Students are then required to enrol for an additional fifth year for one session to complete an Honours Thesis (SOCW4800) of 12,000 - 15,000 words.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. the prescribed sequences in Social Work courses and electives;
2. a total of 18 Level 1 units of credit, including no more than 12 in any one sequence of study, from Lists A, B or C of the BA Rules;
3. 12 units of credit from the General Education program, normally taken in the second and third year of study.
4. The Pass degree Bachelor of Social Work may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are counted towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level, a student must:

5. have obtained 192 units of credit in accordance with 1.-3. above and satisfied the appropriate prerequisites for entry to the Honours level program;
6. obtain a further 24 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Professional Recognition

Graduates with the degree of Bachelor of Social Work from UNSW are eligible for membership of the Australian Association of Social Workers.

Further Requirements

It is a requirement that students who are undertaking placements in certain government departments and related organisations undergo a criminal record check.

4035 Bachelor of Social Work Bachelor of Arts

BSW BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Social Work offers a five-year double degree leading to the award of Bachelor of Social Work Bachelor of Arts. The BSW BA provides an opportunity for students to undertake all the courses required for the Bachelor of Social Work program, as well as 60 units of credit from the Bachelor of Arts program, including an approved major sequence of 42 units of credit (see List A of the BA rules).

Program Objectives and Learning Outcomes

The Bachelor of Social Work is designed to prepare students for the professional practice of social work including work in the wider field of welfare. The essence of social work is working with people, including individuals, couples, families, groups, organisations or communities and this will span people of any age, from any walk of life, or from any ethnic or racial background.

Program Structure

The program is as follows:

Year 1

SOCW1001 Introduction to Social Work
 SOCW1002 Communication and Social Work
 SOCW1003 Human Behaviour 1
 Psychology elective
 Sociology elective
 2 x Arts Major Level 1
 1 x Arts Level 1 elective

Year 2

SOCW2001 Human Behaviour 2
 SOCW2002 Society and Social Work 1
 SOCW2004 Society and Social Work 2
 SOCW2005 Research for Social Work
 SOCW2100 Aboriginal People and Social Work
 2 x Arts Upper Level electives
 2 x General Education electives
 SOCW2007 Bridging (for students exempt from 1st year)

Year 3

SOCW2003 Social Work Practice: Individuals, Families & Groups 1
 SOCW2006 Social Work Practice - Community Work
 SOCW3004 Social Policy 1
 Research elective
 3 x Arts Major Upper Level
 2 x General Education electives

Year 4

SOCW3001 Social Work Practice - Third Year Practicum
 SOCW3002 Social Work Practice: Individuals, Families & Groups 2
 SOCW3006 Socio-Legal Practice
 SOCW3008 Social Work Practice
 2 x Arts Major Upper Level
 1 x Arts elective Upper Level

Year 5

SOCW4002 Social Work Practice in Organisations
 SOCW4003 Social Work Practice
 SOCW4004 Social Philosophy
 SOCW4006 Social Policy 2
 SOCW4010 Social Work Practice

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over five years of study, a minimum of 240 units of credit in approved courses including:

1. the prescribed sequences in Social Work courses and electives;
 2. a total of 48 Level 1 units of credit;
 3. no more than 12 Level 1 units of credit in any one sequence of study, from Lists A, B or C of the BA Rules, other than SOCW courses;
 4. a major sequence of 42 units of credit from List A of the BA Rules;
 5. 12 units of credit from the General Education program.
6. The Pass degree Bachelor of Social Work Bachelor of Arts may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Bachelor of Social Work Bachelor of Arts - Sample Program											
Year	Practice	UOC	Social/ Behavioural Sciences	UOC	Contextual Studies	UOC	General Education	UOC	Arts	UOC	Total
1	SOCW1001 SOCW1002	6 6	SOCW1003 SOCA PSYC	6 6 6	Elective	6			Major Major	6 6	48
2			SOCW2001 SOCW2002 SOCW2004	6 6 6	SOCW2005 SOCW2100	6 6	Gen Ed Gen Ed	3 3	Elective Elective	6 6	48
3	SOCW2003 SOCW2006	6 6	SOCW3004	6	Research Elective	6	Gen Ed Gen Ed	3 3	Major Major Major	6 6 6	48
4	SOCW3002 SOCW3001 SOCW3008	6 12 6			SOCW3006	6			Major Major Elective	6 6 6	48
5	SOCW4002 SOCW4003 SOCW4010	6 6 24	SOCW4006	6	SOCW4004	6					48
Total		84		48		36		12		60	240

Honours Degree

To qualify for the award of the degree at Honours level in the Bachelor of Social Work or Bachelor of Arts, a student must have satisfactorily completed a prescribed period of extra study.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Field Education

An integral aspect of the program is organised learning in the field, and this is a basic requirement for the professional recognition of the degree. In the field education courses, a field educator, usually in a social welfare agency, is responsible for a student learning to apply the principles of professional practice in an actual practice setting. From Year 3, a total of 140 seven-hour days are taken up in this way. Forty of these days are scheduled during academic recess periods. A student's two field education placements are in more than one type of practice setting. The settings vary and can include medical, psychiatric, local government, community health, community, family and child welfare, services to groups with disabilities, services to the aged, services to migrants, income security, and corrective services. Non-government social welfare agencies and all levels of government are utilised. For some students, their second field education placement may be located outside the Sydney metropolitan area.

Professional Recognition

Graduates with the degree of Bachelor of Social Work from UNSW are eligible for membership of the Australian Association of Social Workers.

Further Information

It is a requirement that students who are undertaking placements in certain government departments and related organisation undergo a security check.

4036 Bachelor of Social Work Bachelor of Social Science

BSW BSocSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Social Work offers a five-year double degree leading to the award of a Bachelor of Social Work Bachelor of Social Science. The BSW

BSocSc provides an opportunity for students to undertake all the courses required for the Bachelor of Social Work program, as well as a prescribed 48 units of credit from the School of Social Science and Policy.

Program Objectives and Learning Outcomes

The BSW BSocSc is designed to prepare students for the professional practice of social work while providing extended study in social science, policy analysis and social research.

Program Structure

Year 1

SOCW1001 Introduction to Social Work
 SOCW1002 Communication and Social Work
 SOCW1003 Human Behaviour 1
 SLSP1000 Social Science & Policy
 Psychology elective
 Sociology elective
 2 x Arts Level 1 electives

Year 2

SOCW2001 Human Behaviour 2
 SOCW2002 Society and Social Work 1
 SOCW2004 Society and Social Work 2
 SOCW2005 Research for Social Work
 SOCW2100 Aboriginal People & Social Work
 SLSP2000 Political Economy & the State
 SLSP2002 Policy Analysis Case Studies
 1 x Upper Level elective
 SOCW2007 Bridging (for students exempt from 1st year)

Year 3

SOCW2003 Social Work Practice: Individuals, Families & Groups 1
 SOCW2006 Social Work Practice - Community Work
 SOCW3004 Social Policy 1
 SLSP2001 Applied Social Research 1
 SLSP3000 Social Theory and Policy Analysis
 4 x General Education electives
 1 x Upper Level elective

Year 4

SOCW3001 Social Work Practice - Third Year Practicum
 SOCW3002 Social Work Practice: Individuals, Families & Groups 2
 SOCW3006 Socio-Legal Practice
 SOCW3008 Social Work Practice - Selected Studies 1
 SLSP3001 Applied Social Research 2
 SLSP3002 Social Science and Policy Project
 SLSP3911 Inquiry and Interpretation

Year 5

SOCW4002 Social Work Practice in Organisations
 SOCW4003 Social Work Practice - Selected Studies 2

Bachelor of Social Work Bachelor of Social Science - Sample Program											
Year	Practice	UOC	Social/ Behavioural Sciences	UOC	Contextual Studies	UOC	General Education	UOC	Social Science	UOC	Total
1	SOCW1001 SOCW1002	6 6	SOCW1003 SOCA PSYC	6 6 6	Elective Elective	6 6			SLSP1000	6	48
2			SOCW2001 SOCW2002 SOCW2004	6 6 6	SOCW2005 SOCW2100 Upper Level Elective	6 6 6			SLSP2000 SLSP2002	6 6	48
3	SOCW2003 SOCW2006	6 6	SOCW3004	6	Upper Level Elective	6	Gen Ed x 2 Gen Ed x 2	6 6	SLSP3000 SLSP2001	6 6	48
4	SOCW3002 SOCW3001 SOCW3008	6 12 6			SOCW3006	6			SLSP3001 SLSP3002 SLSP3911	6 6 6	48
5	SOCW4002 SOCW4003 SOCW4010	6 6 24	SOCW4006	6	SOCW4004	6					48
Total		84		48		48		12		48	240

SOCW4004 Social Philosophy
 SOCW4006 Social Policy 2
 SOCW4010 Social Work Practice - Fourth Year Practicum

Field Education

An integral aspect of the program is organised learning in the field and this is a basic requirement for the professional recognition of the degree. In the field education courses, a field educator, usually in a social welfare agency, is responsible for a student learning to apply the principles of professional practice in an actual practice setting. From Year 3, a total of 140 seven-hour days are taken up in this way. Forty of these days are scheduled during academic recess periods. A student's two field education placements are in more than one type of practice setting. The settings vary, and can include medical, psychiatric, local government, community health, community, family and child welfare, services to groups with disabilities, services to the aged, services to migrants, income security, and corrective services. Non-government social welfare agencies and all levels of government are utilised. For some students, their second field placement may be located outside the Sydney metropolitan area.

Academic Rules

Pass Degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over five years of study, a minimum of 240 units of credit in approved courses including:

1. the prescribed sequence of 156 units of credit in courses for the Bachelor of Social Work;
2. the prescribed core sequence of 48 units of credit in courses from the Bachelor of Social Science;
3. a total of 48 Level 1 units of credit;
4. 24 units of credit from Lists A, B or C (excepting SOCW and SLSP) of the BA Rules;
5. 12 units of credit from the General Education program.
6. The Pass degree Bachelor of Social Work Bachelor of Social Science may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in the Bachelor of Social Work or Bachelor of Social Science, a student must have satisfactorily completed a prescribed period of extra study.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Professional Recognition

Graduates with the degree of Bachelor of Social Work from UNSW are eligible for membership of the Australian Association of Social Workers.

Further Requirements

It is a requirement that students who are undertaking placements in certain government departments and related organisations undergo a security check.

4055 Bachelor of Arts Bachelor of Education

BABEd

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined degree of Bachelor of Arts Bachelor of Education at pass level is a four-year program for intending secondary school teachers. Students combine studies in two approved teaching disciplines with both theoretical and practical aspects of education. In the final two years of the program, students develop skills in classroom competence and spend 50 days on supervised teaching practice in allocated secondary schools.

Program Objectives and Learning Outcomes

The combined degree of Bachelor of Arts Bachelor of Education at pass level is a four-year program designed to prepare students for teaching in secondary schools.

Program Structure

To qualify for the Bachelor of Arts Bachelor of Education at pass level it is necessary to complete at least 192 units of credit.

Bachelor of Arts Bachelor of Education - Sample Program - Example Only									
Year	Major Sequence 1	UOC	Major Sequence 2	UOC	Other Courses	UOC	Education	UOC	Total
1	English-Level 1	12	French-Level 1	12	History-Level 1 Sociology-Level 1	6 6	EDST1101 EDST1103	6 6	48
2	English-Upper Level	18	French-Upper Level	12	Upper Level in any Arts course General Education	6 6	EDST Elective	6	48
3	English-Upper Level	6	French-Upper Level	12	General Education	6	EDST3090 EDST4127 EDST4093 EDST Electives	6 3 3 12	48
4	English-Upper Level	6	French-Upper Level	6			EDST4095 EDST4081 EDST4128 EDST4133 EDST4134 EDST4094 EDST4092	3 6 3 3 3 15 3	48
Total		42		42		30		78	192

1. Education courses

Students must complete two Level 1 courses (12 units of credit) including EDST1101, EDST3090 (6 units of credit) and EDST4093 (3 units of credit) are compulsory Year 3 courses. EDST4095, EDST4081, EDST4094 and EDST4092 (27 units of credit) are compulsory Year 4 courses.

A further 18 units of credit must be selected from Education Upper Level elective courses for Years 2, 3 or 4.

2. Teaching Method courses

Students must complete 12 units of credit in approved teaching method courses from two single method courses over years 3 and 4.

3. Arts courses as Preparation for Teaching

Major sequences of at least 42 units of credit must be completed in two schools/departments to provide suitable background for teaching the following school subjects:

Chinese, Drama (Theatre), Economics/Business Studies, English, French, Geography, German, History, Indonesian, Japanese, Literacy/English as a Second Language (ESL)*, Spanish.

**A major sequence in English is the most appropriate background for Literacy/ESL teaching. Students who wish to teach Literacy/ESL may undertake a Linguistics major but they must also include two Level 1 English courses in their program.*

Students should be aware that certain combinations of teaching courses may not lead to satisfactory employment opportunities and may result in timetable difficulties in Year 4. For more details, consult the School of Education.

4. Other Arts courses

The remaining Arts courses in Years 1 and 2 (12 Level 1, 6 Upper Level) should be selected from those available in the Faculty of Arts and Social Sciences.

5. General Education courses

12 units of credit must be selected from those approved for students in the Faculty of Arts and Social Sciences.

6. English Proficiency

Proficiency in English is essential in all Education courses. Prospective teachers must be able to communicate effectively with school students and staff members.

Honours Level

Students may elect to undertake an Honours program in either their fourth or fifth year of study (ie before the intensive teacher preparation year or afterwards). The Honours program may be undertaken in either Education or in an Arts discipline. Students with a good credit average in Year 1 are normally invited to undertake additional study in the relevant discipline over Years 2 and 3.

Academic Rules

Pass degree

To qualify for the award of the degree at Pass level, a student must obtain, normally over four years of study, a minimum of 192 units of credit in approved courses including:

1. a total of 48 Level 1 units of credit;
2. no more than 12 Level 1 units of credit in any one sequence of study from Lists A, B and C of the BA Rules;
3. 78 units of credit in EDST Education including compulsory core courses in Years 1, 3 and 4;
4. two sequences of 42 units of credit from List E below;
5. an additional 6 Upper Level units of credit from Lists A, B and C of the BA Rules;
6. 12 units of credit from the General Education program, normally taken in the second, third or fourth year of study.

List E CHIN Chinese, ENGL English*, ECON Economics, FREN French, GEOH/GEOS Geography, GERS German, HIST History, INDO Indonesian, JAPN Japanese, LING Linguistics, MEFT Theatre, SPAN Spanish

**A major sequence in ENGL English is the most appropriate background for Literacy/ESL teaching.*

7. The Pass degree Bachelor of Arts Bachelor of Education may be awarded with Distinction where a candidate has achieved a weighted average mark (WAM) of at least 75% in all courses completed since enrolment at UNSW which are credited towards the degree.

Honours Degree

To qualify for the award of the degree at Honours level in one or two schools/specialisations, a student must:

8. have obtained 192 units of credit in accordance with 1.-6. above and satisfied the appropriate prerequisites for entry to the Honours level program;

9. obtain a further 48 units of credit in an approved Honours program.

The Honours degree is awarded in three classes (Class 1, Class 2 in two Divisions and Class 3). Students who fail to obtain one of these classes may proceed to graduate with the Pass degree.

Further Requirements

A police record check is required before students can be employed as a teacher and all schools require student teachers and potential applicants to have signed the mandatory "Working with Children Check".

Combined Degree Programs

The Faculty strongly encourages combined program study. The following programs are available to students from other faculties:

Faculty of the Built Environment

Bachelor of Architecture/Bachelor of Arts (3262)

BArch BA (Faculty of Built Environment)

Bachelor of Architecture/Bachelor of Social Science (3263)

BArch BSocSc (Faculty of Built Environment)

College of Fine Arts

Bachelor of Art Theory/Bachelor of Arts (4806)

BArtTh BA (College of Fine Arts)

Bachelor of Art Theory/Bachelor of Social Science (4807)

BArtTh BSocSc (College of Fine Arts)

Bachelor of Fine Arts/Bachelor of Arts (4812)

BFA BA (College of Fine Arts)

Faculty of Commerce and Economics

Bachelor of Commerce/Bachelor of Arts (3525)

BCom BA (Faculty of Commerce and Economics)

Bachelor of Commerce/Bachelor of Social Science (3527)

BCom BSocSc (Faculty of Commerce and Economics)

Bachelor of Economics/Bachelor of Arts (3526)

BEc BA (Faculty of Commerce and Economics)

Bachelor of Economics/Bachelor of Social Science (3528)

BEc BSocSc (Faculty of Commerce and Economics)

Faculty of Engineering

Bachelor of Engineering/Bachelor of Arts (various)

BE BA (Faculty of Engineering)

Faculty of Law

Bachelor of Arts/Bachelor of Laws (4760)

BA LLB (Faculty of Law)

Bachelor of Arts (Media & Communications)/Bachelor of Laws (4764)

BA (Media) LLB (Faculty of Law)

Bachelor of International Studies/Bachelor of Laws (4765)

BIntSt LLB (Faculty of Law)

Bachelor of Social Science/Bachelor of Laws (4761)

BSocSc LLB (Faculty of Law)

Bachelor of Social Work/Bachelor of Laws (4785)

BSW LLB (Faculty of Law)

Faculty of Medicine

Bachelor of Arts/Bachelor of Medicine (3841)

BA BSc(Med)MBBS (Faculty of Medicine)

Faculty of Science

Bachelor of Environmental Science/Bachelor of Arts (3932)

BEnvSc BA (Faculty of Science)

Bachelor of Science/Bachelor of Arts (3930/3931)

BSc BA (Faculty of Science)

Bachelor of Science/Bachelor of Education (4075)

BSc BEd (Faculty of Science)

Bachelor of Science/Bachelor of Social Science (3935/3936)

BSc BSocSc (Faculty of Science)

For details of these combined degree programs, consult the relevant Faculty.

Plan Rules and Information

Aboriginal Studies

Coordinator: Celia Moon, Academic Coordinator, Nura Gili

Indigenous Programs Centre

Office: Nura Gili Resource Centre

Tel: (02) 9385 3805

Email: nuragili@unsw.edu.au

Aboriginal Studies provides an integrated, progressive exploration of Indigenous cultures, society and epistemologies and Australian race relations historically and in contemporary Australian society. Aboriginal Studies places Indigenous experience and Indigenous conceptual frameworks at the centre of the program. All courses are taught by academic staff of Nura Gili with input from elders from the local Indigenous community and Indigenous specialists. Aboriginal Studies critiques received notions of Australian history and identity, policy and contemporary relations between non-Indigenous and Indigenous Australians.

The Level 1 core courses offer students an introduction to Aboriginal identity and culture and to how Indigenous Australians represent themselves both here in Australia and overseas. These foundational courses provide the key conceptual frameworks which set the context for the Aboriginal Studies program. Level 2 courses provide a detailed political history analysis of Aboriginal cultures and their interface with non-Indigenous Australia from pre-colonisation to contemporary Australia across a range of areas including health, law, education, arts and culture. Level 3 courses provide theoretical frameworks from anthropology, sociology, politics, social work, cultural heritage, gender studies, race theory and Indigenous research perspectives, of the complexities of inter-racial relations in Australia. Courses may be studied individually and are all designed to be self-contained. They are available to all students within the Faculty and many from outside. As well as providing the basis for a major sequence, Aboriginal Studies courses also form excellent 'extensions' to majors in Australian Studies, History, History and Philosophy of Science, Politics and International Relations, Sociology and Anthropology, Social Work and Film and Theatre.

Major Sequence

Aboriginal Studies may be taken as a major sequence. This requires the completion of 36 units of credit in Aboriginal Studies' approved courses. Students must complete the program's two core courses at Level 1 (ATSI1001 and ATSI1002) and two core courses at Level 2 (ATSI2001 and ATSI2002) as well as at least two Level 3 Aboriginal Studies courses, at least one in session one (ATSI3001; ATSI3005) and one in session two (ATSI3002; ATSI3003; ATSI3004).

First Year Core Courses (12 UOC)

ATSI1001	Introduction to Aboriginal People and Society	S1
ATSI1002	Australia: Representations, Identities and Difference	S2

Second Year Core Courses (12 UOC)

ATSI2001	Aboriginal Australia: The Pre-Colonial and Colonial Experience	S1
ATSI2002	Aboriginal Australia: The Post-Colonial Experience	S2

Third Year Core Courses (12 UOC)

ATSI3001	Colonisation and Indigenous Identity Formation	S1
ATSI3002	Indigenous Australia: Gendered Identities	S2
ATSI3003	Cultural Heritage Management	S2
ATSI3004	Aboriginal People and Social Work	S2
ATSI3005	Whiteness - Beyond Colour: Identity and Difference	S1

Art History and Theory

Coordinator: Peter McNeil, School of Art History and Theory

Tel: (02) 9385 0777

Email: artht@unsw.edu.au

Website: www.cofa.unsw.edu.au/schools/artheorytheory/

Courses in Art History and Theory are offered by the School of Art History and Theory at the College of Fine Arts and taught on the Paddington Campus. There may be a limit on the number of places available to Arts students.

Art History and Theory offers an interdisciplinary approach to the study of visual arts and culture. These courses, taken individually or as a plan,

will provide an intriguing and useful 'set' of strategies for understanding art objects, images and visual culture.

Courses offered within the Art History and Theory program include such topics as notions of Western art history, forms of visuality, the relationships of Western to non-Western art, the mass culture of television, films, the popular press, advertising and the culture of museums. Other issues explored include the social relationship of art and design to the themes of science, sexuality, trauma and memory. Students may choose courses which lay foundations for professional practice in art writing and arts-related work. (The School also offers a wide range of electives and General Education courses, which complement the list below.)

Major Sequence

A major sequence consists of 36 units of credit in Art Theory courses offered by the College of Fine Arts (12 Level 1 and 24 Upper Level units of credit).

Level 1

SAHT1211	Theories of the Image
SAHT1212	Theories of Art History and Culture
SAHT1221	Contexts of Art
SAHT1222	The Production of Art

Upper Level

SAHT2211	Eurocentred Visions: Grand Narratives in Western Art
SAHT2212	Art and Cultural Difference
SAHT2213	Memory and Self
SAHT2214	Approaches to Australian Art
SAHT2221	Writing for Art and Design
SAHT2222	Methods of Research and Writing on Art and Design
SAHT3211	Art after Postmodernism
SAHT3212	Art and Everyday Life
SAHT3213	Museum Studies: Exhibitions, Collections and Material Culture

Asian Studies

Coordinator: A/Prof David Reeve, Department of Chinese and Indonesian Studies

Office: Room 238, Morven Brown Building

Tel: (02) 9385 1019

Email: d.reeve@unsw.edu.au

Asian Studies is an interdisciplinary area of study focusing on modern Asian societies and cultures and their historical traditions, with a particular focus on China, Indonesia, Japan and Korea. Asian Studies brings together various perspectives and approaches from culture, Economics, History, Politics, Sociology, literature and media to explore the changes that have happened in the Asian region over the last century, the integration of Asian countries in a global environment and Australia's relations with its Asian neighbours.

Students who wish to specialise in Asian studies are encouraged to learn a relevant Asian language.

Major Sequence

At an undergraduate level, the study of Asian Studies is available in the Bachelor of Arts and related combined degree programs. Students may take a major sequence in Asian Studies as their second major, together with a major in a school-based discipline within the Faculty of Arts and Social Sciences. Alternatively, students may take one or more Asian Studies courses toward the general requirements of their Bachelor degree.

Students wishing to gain a major sequence in Asian Studies must obtain 6 Level 1 and 36 Upper Level (or 12 Level 1 and 30 Upper Level) units of credit from the following courses. Students who wish to count any other course towards their major sequence in Asian Studies should consult the Coordinator.

Level 1

ASIA1001	Introduction to Contemporary Asia	S2
ASIA1002	Introducing Southeast Asia	S1

Or 12 UOC from approved language courses in Chinese, Japanese, Korean or Indonesian language.

Upper Level

CHIN2301	Chinese Social and Cultural Change through Visual Art	S1
CHIN2302	Chinese Cinema	S1
CHIN2303	Gender in Contemporary Chinese Culture and Society	S2

CHIN2310	Along the Silk Road: Conquerors, Traders and Explorers	X1
CHIN2315	Transnational Chinese Media*	
CHIN2400	China Imagined and Perceived	S2
CHIN3900	Advanced Chinese Studies	S1
CHIN3901	Research Methods in Chinese Studies	S2
ECON2305	Modern Asian Economic History	S1
HIST2050	Women in Southeast Asian Societies*	
HIST2055	Modern India	S2
HIST2082	The 'Orient': Western Engagement with Asia*	
HIST2084	The Vietnam War/The American War *	
HIST2085	Australia's Asian Context*	
HIST3102	Premodern Japan: Status, Sex and Power	S1
HIST3107	Representing Asians In Histories*	
INDO3502	Islam in Indonesia	S1
INDO3503	Indonesian Political Culture	S2
INDO3900	Introduction to Indonesian Studies	S1
INDO3901	Indonesian Studies Research Methods	S2
JAPN2500	Introduction to Japanese Studies	S1 & S2
JAPN2510	Japan and Korea: Cultures in Conflict	S1
JAPN2513	Cultures of War and Peace in Japan*	
JAPN3601	Cultural Studies and in Contemporary Japan	S2
JAPN3602	Gender and Sexuality in Japan*	
JAPN3605	Japan in the World*	
JAPN3900	Introduction to Japanese Studies (Advanced)	S1
JAPN3901	Special Topics in Japanese Studies (Advanced)	S1
KORE2500	Korean Civilisation and Culture	S1
KORE2600	Modern Korean Society*	
KORE2601	Gender/Politics in Korean Literature	S2
KORE2602	Korean Literature: A Survey in English*	
KORE2603	Korean Encounters and Worldly Visions*	
KORE3900	Introduction to Korean Studies (Advanced)	S1
KORE3901	Special Topics in Korean Studies (Advanced)	S1
MEFT3104	Transnational Media in the Asia Pacific	S1
MEFT3205	Cinemas and Cultures	S2
POLS2014	Regional Cooperation and Conflict in Southeast Asia *	
POLS2036	Political Development in Northeast Asia	S1
SOCA3205	Modern Southeast Asia: Society and Culture *	

*Not offered in 2006.

Australian Studies

Coordinators: Dr Brigitta Olubas and Dr Elizabeth McMahon, School of English

Office: Room 145, Morven Brown Building

Tel: (02) 9385 2298

Website: www.arts.unsw.edu.au/australianstudies/

Australian Studies provides an interdisciplinary exploration of Australian culture and society. Its concerns are wide-ranging. Aboriginal issues, the environment, gender identity and politics, and the shaping of cultural icons and institutions are central to its themes.

The Level 1 core courses offer students an introduction to important issues and debates in Australian Studies. Upper Level courses are taught and administered through different schools in the Faculty and offer a range of interdisciplinary and disciplinary approaches. Courses may be studied individually and are all designed to be self-contained. They are available to all students within the Faculty and many from outside. As well as providing the basis for a major sequence, Australian Studies courses also form excellent 'extensions' to majors in English, Geography, History, History and Philosophy of Science, Politics and International Relations, Sociology and Anthropology and Film and Theatre.

Major Sequence

Australian Studies may be taken as a major sequence. This requires the completion of 42 units of credit in Australian Studies' approved courses (listed below). Students must complete the program's two introductory core courses at Level 1 (AUST1001 and AUST1003) as well as at least one Upper Level Aboriginal course (AUST2004;2005;2012). The remaining 24 units of credit (or four courses) may be selected either from other A-list core offerings (with AUST numbers) or from the B-list of Upper Level electives.

List A: First Year Core Courses

AUST1001	Australia: Representations, Identities and Difference	S2
AUST1003	Paradise Lost? Australian Environmental History	S1

List A: Upper Level Core Courses

AUST2004	Aboriginal Australia: The Pre-Colonial and Colonial Experience	S1
AUST2005	Aboriginal Australia: The Post-Colonial Experience	S2
AUST2006	Australian Playwriting*	
AUST2008	In the Firing Line: Australians go to War	S2
AUST2009	Australian Urban Environments	S2
AUST2010	Society & Environmental Process: Botany Bay	S2
AUST2011	Australian Migration Issues	X1
AUST2012	Indigenous Australia: Gendered Identities	S2
AUST2013	Australian Children's Literature and Literacy*	
AUST2014	Twentieth-century Australian Literature	S1
AUST2015	Contemporary Australian Women Writers	S2
AUST2017	Labour History	S2
AUST2018	Australian Sport: History and Culture	S1
AUST2019	A Commonwealth for a Continent: Australia 1901-1949	S1
AUST2020	Australia Since World War II	S2
AUST2023	Regional Australia: Geographies of Uneven Development	X2
AUST2024	Power & Policy in Australian Politics	S2
AUST2025	Sex, Human Rights and Justice*	
AUST2026	Music of Aboriginal Australians	S1
AUST2027	Staging Australia	S2
AUST2028	Australian Cinema and Television	S1
AUST2029	Cities: Experiencing Sydney	S1
AUST2030	Approaches to Australian Art	S1
AUST2031	Transport, Land Use and Environment	S1
AUST2032	Environmental Impact Assessment	S1
AUST2033	Australian Masculinities: Reading Gender, Sex and Culture*	
AUST2034	Women and Men: Gender in Australia*	
AUST2109	Values and Beliefs in Australian Culture*	
AUST3103	Urban Legends: The History of Sydney	S1
AUST3105	The Face of Battle*	

List B: Upper Level Electives

GEOH2611	Geographies of the Asia-Pacific	S1
GEOS2711	Australian Climate and Vegetation	S2
GEOS3711	Biogeography and Human Impact in Australia*	
HIST2047	Winners and Losers: Poverty, Welfare, Justice in Australia *	
HIST3902	Australian History and its Constructions	S1
HIST3904	Going Public: Public History and the Historian	S2
MGMT2702	Industrial Law	S1
MGMT2704	Social Organisation of Work	S2
MGMT3705	Management and Employment Relations	S1
SOCA3208	Colonisation and Indigenous Identity Formation	S1
SOCA3210	Whiteness Beyond Colour: Identity and Difference	S1

*Not offered in 2006.

Honours Entry

At present only the Combined Honours program is available in Australian Studies. Students must have obtained:

1. Combined Honours prerequisites in a discipline.
2. 42 units of credit at Credit level or better in prescribed Australian Studies and Australia related courses, including 12 units of credit in Level 1 AUST courses, and at least one of the Australian Studies Aboriginal courses.

AUST4500	Combined Australian Studies Honours (Research) Full-Time
AUST4550	Combined Australian Studies Honours (Research) Part-Time

Biological Science

Coordinator: A/Prof Michel Beal, School of Biological, Earth and Environmental Sciences

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Biological Science encompasses all aspects of plants and animals including their relationship to each other and to the environment. Areas of study in Biological Science include cell biology, plant and animal physiology, ecology, genetics, taxonomy, marine biology, and evolutionary studies. Knowledge of the Biological Sciences is particularly relevant in

the fields of wildlife and vegetation management, agriculture, forestry, conservation and other related environmental sciences.

Major Sequence

A major sequence consists of 12 units of credit at Level 1 (BIOS1101 and one of BIOS1201 or BIOS1301) plus 30 units of credit at Upper Level. Note that many Level III courses assume knowledge acquired in Level II courses.

Level 1

BIOS1201	Molecules, Cells and Genes	S1
BIOS1301	Ecology and Sustainability	S1
BIOS1101	Evolutionary and Functional Biology	S2

Upper Level

BEES2041	Data Analysis for Life and Earth Sciences	S1
BIOS2011	Evolutionary and Physiological Ecology	S1
BIOS2031	Biology of Invertebrates	S2
BIOS2051	Flowering Plants	S2
BIOS2061	Vertebrate Zoology	S1
BIOS3011	Animal Behaviour	S2
BIOS3021	Comparative Animal Physiology	S1
BIOS3061	Plant Ecosystem Processes	S1
BIOS3071	Conservation Biology and Biodiversity	S1
BIOS3081	Ocean Biology and Fisheries	S1
BIOS3091	Marine and Aquatic Ecology	S2
BIOS3111	Population and Community Ecology	S2
BIOS3601	Advanced Field Biology	S1

Chemistry

Office: Room 102, Heffron Building

No more than two Level 1 courses (12 units of credit) and three Upper Level courses (18 units of credit) may be counted towards the degree of Bachelor of Arts or related programs.

Level 1

CHEM1011	Fundamentals of Chemistry 1A
CHEM1021	Fundamentals of Chemistry 1B
CHEM1031	Higher Chemistry 1C
CHEM1041	Higher Chemistry 1D

Upper Level

Chemistry offers a number of Upper Level courses in the four main discipline areas. Consult the School of Chemistry as to the appropriate choice to make. The following courses are available:

CHEM2011	Physical Chemistry
CHEM2021	Organic Chemistry
CHEM2031	Inorganic Chemistry and Structure
CHEM2041	Chemical and Spectroscopic Analysis
CHEM2839	Inorganic Chemistry

Note: Chemistry is not available as a major sequence within the Faculty of Arts and Social Sciences.

Chinese Studies

Coordinator: Associate Professor Hans Hendrischke

Administrative Assistant: Rosanna Cheung

Office: Room 240, Morven Brown Building

Tel: (02) 9385 2416

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Website: <http://languages.arts.unsw.edu.au/chinese/chinese.html>

The Department offers a flexible language and academic program for students with different interests and different Chinese language backgrounds. Students can enter Chinese language courses at different levels, depending on their knowledge of Chinese characters. Chinese Studies courses enable students to study aspects of Chinese culture and society. Students who wish to study additional subjects on China and Asia may concurrently enrol in Asian Studies.

In order to count Chinese Studies as a major sequence, students must complete 42 units of credit in Chinese language and Chinese Studies courses, including two Level 3 or two Level 4 courses.

Major Sequences (42 units of credit)

Beginners' entry level

	UOC
Year 1	CHIN1006/7
Year 2	CHIN2006/7
Year 3	CHIN3006/7
1 Chinese Studies/Professional Elective course	6

Intermediate entry level

Year 1	CHIN2006/7	12
Year 2	CHIN3006/7	12
Year 3	1 Professional Elective course plus 2 Chinese Studies/Professional Elective courses	18

Advanced entry level

Year 1	CHIN3006/7	12
Year 2	1 Professional Elective course plus 1 Chinese Studies/Professional Elective course	6
Year 3	3 Chinese Studies/Professional Elective courses	18

Professional Studies entry level

Year 1	2 Professional Elective courses	12
Year 2	2 Chinese Studies/Professional Elective courses	12
Year 3	3 Chinese Studies/Professional Elective courses	18

Honours

Prerequisite: 54 units of credit in Chinese Studies, including CHIN3900 and CHIN3901 and a grade average of at least 70% in Chinese Studies courses. Honours candidates have to enrol in the two pre-Honours courses worth 6 units of credit each in Year 2 and/or Year 3. Intending Honours students are recommended to contact the Head of Department at an early stage in their undergraduate studies to discuss their selection of courses and their proposal for the Honours research project.

Chinese Language Courses

Level 1

(Introductory)

CHIN1006	Introductory Chinese 1	S1
CHIN1007	Introductory Chinese 2	S2

Level 2

(Intermediate)

CHIN2006	Intermediate Chinese 1	S1
CHIN2007	Intermediate Chinese 2	S2

Level 3

(Advanced)

CHIN3004	Advanced Chinese (In-Country)	X1
CHIN3006	Advanced Chinese Language 1	S1
CHIN3007	Advanced Chinese Language 2	S2

Level 4

(Professional Electives)

CHIN3030	Professional Communication 1	S1
CHIN3031	Professional Communication 2	S2
CHIN2210	Chinese English Translation	S1 & S2
CHIN2211	Interpreting between Chinese and English	S1 & S2
CHIN2220	Contemporary Chinese Literature	S1
CHIN2221	Classical Chinese Literature	S2
CHIN2222	The Chinese Lyric Journey: Classical Poetry and Painting	S1
CHIN2500	Advanced Chinese Business Language	S1
CHIN2502	Commercial Chinese	S2

Chinese Studies Courses

CHIN2301	Chinese Social and Cultural Change through Visual Art	S1
CHIN2302	Chinese Cinema	S1
CHIN2303	Gender in Contemporary China	S2
CHIN2310	Along the Silk Road: Conquerors, Traders and Explorers	X1
CHIN2313	Introduction to Chinese Performing Arts	S1
CHIN2314	Introduction to Chinese Musical Culture	S2
CHIN2315	Transnational Chinese Media*	
CHIN2400	China Imagined and Perceived	S2
CHIN2501	Chinese Business Enterprise	S1
CHIN3900	Advanced Chinese Studies	S1
CHIN3901	Research Methods in Chinese Studies	S2

* Offered every second year; not offered in 2006.

Honours Level

CHIN4000	Chinese Honours (Research) Full-Time
CHIN4050	Chinese Honours (Research) Part-Time
CHIN4500	Combined Chinese Honours (Research) Full-Time
CHIN4550	Combined Chinese Honours (Research) Part-Time

Cognitive Science

Coordinator: Dr Anthony Corones, School of History and Philosophy of Science

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In the last twenty years, Cognitive Science has emerged as an exciting and fruitful domain of enquiry in which there is a convergence of interests in a number of disciplines which deal with mind, language, knowledge and intelligence. The Cognitive Science movement is based on a broad consensus that the problems and issues do not belong exclusively to any one discipline, but fall collectively to all of them.

The Cognitive Science program is designed to complement a school-based major sequence by grouping courses within the fields of Philosophy, Psychology, Linguistics, and Computer Science, which have special relevance to Cognitive Science. It provides the opportunity for students who undertake one or more of the Level 1 courses in the relevant disciplines to become acquainted with the broader enterprise of Cognitive Science through participation in the core course 'HPSC2610 Computers, Brains and Minds', and to build upon that acquaintance in selecting further courses from the program. Students should take the core course in their second year of study.

Major Sequence

Entry to the program requires 12 units of credit from the Level 1 prerequisite courses listed below. A major in Cognitive Science requires not less than 24 units of credit from the Upper Level courses listed in the program, including the core course. If you wish to major in Cognitive Science, these Upper Level courses may not be counted toward a major sequence in a School or Department. In planning your program for the degree, you should make sure that you meet the prerequisite requirements of individual courses, unless granted exemption by the course authority.

Level 1

Prerequisite: 12 units of credit obtained in any of the following courses:

HPSC1200	Science, Good, Bad and Bogus
LING1000	The Structure of Language
PHIL1010	Thinking about Reasoning
PHIL1011	Minds, Bodies and Persons*

Upper Level

Core course:

HPSC2610	Computers, Brains and Minds

plus at least 18 units of credit obtained in any of the following courses:

COMP3411	Artificial Intelligence
HPSC2620	Body, Mind and Soul: The History and Philosophy of Psychology*
LING2520	Generative Grammar*
LING2680	Language Universals and Linguistic Typology*
LING3003	Theoretical and Descriptive Linguistics
PHIL2020	Philosophy of Language
PHIL2206	Philosophy of Mind
PHIL2207	Philosophy of Psychology
PHIL2218	Philosophical Foundations of Artificial Intelligence
PSYC2071	Perception and Cognition
PSYC2081	Learning and Physiological Psychology

*Not offered in 2006.

Computing

Coordinator: Dr Tim Lambert

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Website: www.cse.unsw.edu.au

Major Sequence

A major sequence in Computing within the Faculty of Arts and Social Sciences consists of 42 units of credit comprising: COMP1081, COMP1091, COMP2091 plus COMP2011 and at least 18 units of credit Level III Computer Science courses.

Students with well developed IT skills may omit COMP1081 and enrol in an extra level III Computer Science elective, alternatively the other option is to replace COMP1081, COMP1091 and COMP2091 with COMP1711 and COMP1721. MATH1131 and MATH1081 are recommended to be taken with these courses.

Note: No more than 12 units of Level 1 units of credit in Computer Science can be taken.

Level 1

COMP1081	Harnessing the Power of Information Technology
COMP1091	Solving Problems with Software and Tools

Upper Level

COMP2091	Computing 2
COMP2011	Data Organisation
COMP2041	Software Construction: Techniques and Tools
COMP2121	Microprocessors and Interfacing
COMP2711	Higher Data Organisation
COMP2920	Professional Issues and Ethics
COMP3111	Software Engineering
COMP3120	Introduction to Algorithms
COMP3121	Algorithms and Programming Techniques
COMP3131	Programming Languages and Compilers
COMP3141	Software System Design and Implementation
COMP3151	Foundations of Concurrency
COMP3211	Computer Architecture
COMP3231	Operating Systems
COMP3311	Database Systems
COMP3331	Computer Networks and Applications
COMP3411	Artificial Intelligence
COMP3421	Computer Graphics
COMP3431	Robotic Software Architecture
COMP3441	Cryptography and Security
COMP3511	Human Computer Interaction

The School of Computer Science and Engineering offers advanced versions of some of the courses listed here. Please consult the webpages at www.cse.unsw.edu.au for updated versions of timetables and availability of these courses.

Criminology

Coordinator: Professor Janet Chan, School of Social Science and Policy

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From its original narrow inquiry into the causes of crime and punishment of offenders, criminology has developed into a multidisciplinary area of study involving contributions from sociology, political science, law, psychology, history and other disciplines. The Bachelor of Social Science in Criminology has a research and policy analysis orientation. It builds on the core curriculum in Bachelor of Social Science, which provides solid training in quantitative and qualitative research methods, social and economic theory, and policy analysis. The Criminology core courses provide students with substantive knowledge about criminal law and procedures, criminal justice institutions, theoretical debates in criminology and issues in criminal justice research and policy. A range of elective courses on criminological topics are available from the Faculty of Arts and Social Sciences and the Faculty of Law.

The Core Program in the Bachelor of Social Science in Criminology

First Year

CRIM1000	Criminal Law and Justice 1
CRIM1001	Criminal Law and Justice 2
SLSP1001	Research and Information Management
SLSP1000	Social Science and Policy

Second Year

CRIM2000	Criminological Theories
SLSP2000	Political Economy and the State
SLSP2001	Applied Social Research 1
SLSP2002	Policy Analysis Case Studies

Third Year

CRIM3000	Researching Crime and Justice
SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science and Policy Project

Electives

24 units of credit in the approved list of criminology-related electives (an indicative list):

CRIM2010	Community Corrections
CRIM2011	Crime and Society
CRIM2012	Crime Prevention Policy
CRIM2013	Juvenile Justice
CRIM2014	Issues in Policing
CRIM2015	Sentencing
CRIM2016	The Criminal Justice System

CRIM2017	The 'New' Prosecutors
CRIM2018	Crime, Power and Human Rights: Transnational Organised Crime and State Crime
CRIM3010	Comparative Criminal Justice: From Investigation to Trial
ENGL2480	Crime Fiction, Film and Theatre
HIST2468	History from Crime
POLS2020	Sex, Human Rights and Justice
PSYC3301	Psychology and Law
SLSP2820	Crime and Punishment in Historical Perspective
SOCA2208	Deviant Fieldwork, Data Collection and Analysis
SOCA3103	Professions: Discipline, Knowledge, Power
SOCA3408	Crime in Australian Society
SOCA3409	Crime, Gender and Sexuality
SOCA3410	Deviance
SOCA3411	Forensic Sociology: Evidence, Implications and Responsibility
SOCA3701	Discipline of the Law
SOCA3710	Moral Panics
SOCA3802	Fear and Hatred in Everyday Life
SOCA3810	The Space of Terror

Honours Level

Students must have obtained 144 units of credit in accordance with the requirements for the BSocSc in Criminology pass degree including the pre-Honours course SLSP3911 Inquiry and Interpretation in the Social Sciences. Students need to have attained a good credit or better average in their SLSP and CRIM core and related courses.

Level 1

CRIM1000	Criminal Law and Justice 1	S1
CRIM1001	Criminal Law and Justice 2	S2
SLSP1001	Research and Information Management	S2
SLSP1000	Social Science and Policy	S1

Upper Level

CRIM2000	Criminological Theories	S1
CRIM3000	Researching Crime and Justice	S1
CRIM4000	Criminology Honours	S1 & S2
SLSP2000	Political Economy and the State	S1
SLSP2001	Applied Social Research 1	S1
SLSP2002	Policy Analysis Case Studies	S2
SLSP2820	Crime and Punishment in Historical Development	S2
SLSP3000	Social Theory and Policy Analysis	S1
SLSP3001	Applied Social Research 2	S1
SLSP3002	Social Science and Policy Project	S2

Development Studies

Coordinator: A/Prof Michael Johnson, School of Social Science and Policy

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Website: <http://www.arts.unsw.edu.au/futurestudents/developmentstudies/undergrad.html>

The Development Studies program is an interdisciplinary program that introduces students to the issues that concern the developing world such as poverty and inequality and the theories, policies and practical measures introduced to address these issues. Central issues and themes that are examined include the history, sociology and political economy of development; the causes of poverty and global inequality; the relationship between the environment and development; the debates about globalisation and the relationships of international institutions to developing countries. A range of electives grouped by their focus on development practice, historical development, political economy, regional and cultural studies including human rights are offered.

Development Studies may be taken as a major sequence (42 units of credit). Students are advised that the program is designed to complement, most particularly, related majors in Politics and International Relations, Sociology and Anthropology, Economics, Economic History, Geography, History, History and Philosophy of Science, Policy Studies, Political Economy, Politics and Spanish and Latin American Studies. Bachelor of Social Science students majoring in Development Studies as part of the Bachelor of Social Science will complete the normal core courses for Social Science and Development Studies (Note that SLSP2000 excludes PECO2000).

To complete a major sequence you must take at least two compulsory COMD courses (from COMD1001 or, COMD1002 or, SOCA1006 or, GEOH1601 and COMD2000) and two from the list of core elective COMD courses listed below, totalling 24 units of credit, and a further

18 units of credit from the other approved elective courses listed below. The Upper Level courses selected must include at least 12 units of credit at the 3000 level. With the approval of the Coordinator of the Development Studies program, courses from other schools may be substituted for up to 12 of the optional units of credit. Many of these courses will have their own prerequisites, and you must also fulfill Faculty of Arts and Social Sciences requirements concerning your distribution of courses. Please check school entries for availability, and consult the Coordinator about the best combinations of courses.

Major Sequence

Level 1

Compulsory courses

From 6 to a maximum of 12 units of credit in the core program selected from:

COMD1001	Development Studies: The Emergence of Underdevelopment	S1
or		
COMD1002	Development Studies: Poor World, Rich World	S2
or		
SOCA1006	Introduction to Globalisation (except if majoring in INST)	S1
or		
GEOH1601	Australian and Global Geographies: Integration and Divergence	S2

Upper Level Courses

At least two courses (12 units of credit) including the compulsory course (COMD2000) selected from the Upper Level Core courses and three elective courses (18 units of credit) if only one six credit point course completed at Level 1:

Compulsory course

COMD2000	The Theory and Practice of Development	S1

And at least one of the following:

COMD2010	(Un)Making the Third World: History and Global Development B	S1
COMD2050	Sustainable Development, Globalisation and the Third World	S1
ECON3110	Development Economics	S2
POLS2023	Globalisation and Uneven Development	S2

Electives

Students majoring in Development Studies must select a minimum of an additional 18 units of credit made up of additional courses taken from the core electives list or selected from the following electives listed by focus of study. The additional requirement of 6 units of credit for students intending to enrol in Combined Honours is detailed below. Students should carefully check any prerequisite requirements are met.

Development Practice

GEOH2001	Field Research	S2
GEOH3641	Regional Australia: Geographies of Uneven Development	X2
GEOH3651	Geographies of Migration and Settlement	S2
SOCA2204	Anthropology Research Fieldwork	S2

Political Economy

ECON3109	Economic Growth, Technology and Structural Change	S1
MEFT3104	Transnational Media in the Asia Pacific	S1
PECO2000	Political Economy and the State (excludes SLSP2000)	S1
PECO3000	Political Economy (excludes ECON3119)	S2
POLS2049	Asia in the International Political Economy*	
POLS3054	Theorising International Political Economy	S1
POLS3058	Foundations of Human Rights*	
SOCA3711	Political Economy of Media and Culture*	

Globalisation

COMD2020	(Un)Making the Third World: History and Global Development A (excludes HIST2061, INST2000)	S2
HIST2510	The United States and Changing Global Orders	S2
POLS3054	Theorising the International Political Economy	S1
SOCA2103	Globalisation and Fragmentation	S2

Historical Development

HIST2013	Prophets and Millenarian Movements in World History*	
HIST2039	Environmental History*	

HIST2352	Modern China, 1600 - Present	S2
HIST3106	Environmental History	S2
HIST3900	Historiography of Southeast Asia	S2
SPAN3401	Colonising the Americas: The Spanish and Portuguese Empires	S1

Regional, Cultural Studies and Human Rights

GEOH2611	Geographies of the Asia-Pacific	S1
GEOH3621	Place, Identity and Difference	S1
HIST2050	Women in Southeast Asian Societies*	
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia*	
MEFT2101	Media Uses: Practices of Cultural Consumption*	
POLS2036	Political Development in Northeast Asia	S1
POLS2048	International Security	S2
SOCA3104	Global Migration, Global Refugees	S1
SOCA3106	Anthropology and Tourism *	
SOCA3204	Modernity and Development in the Pacific Islands *	
SOCA3211	Development and Modernity	S2
SOCA3212	Environment, Society and Culture	S1
SOCA3810	The Space of Terror *	
SPAN2418	Amazonia*	
SPAN3339	Latin American Culture and Globalisation: From Macondo to McOndo	S2

* Not offered in 2006.

Honours Level

Students who have completed 54 units of credit in Development Studies, including all compulsory courses, at a good credit average may, subject to the permission of the Coordinator, be admitted to enrol in a single Honours program in Development Studies. Applicants for Combined Honours (48 units of credit) must have also met the requirements for an additional single Honours in one of the Schools, Departments or other Programs teaching in the Bachelor of Arts or Bachelor of Social Science programs. If these requirements are met, and with the approval of the relevant School, Department or Program, students can complete an Honours thesis on a Development Studies or an interdisciplinary topic.

COMD4000	Development Studies Honours (Research) Full-Time
COMD4050	Development Studies Honours (Research) Part-Time
COMD4500	Combined Honours (Research) in Development Studies Full-Time
COMD4550	Combined Honours (Research) in Development Studies Part-Time

Economic History

See **Economics**.

Economics

Coordinator: School of Economics

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The School of Economics offers three major sequences that may be undertaken within the Faculty of Arts and Social Sciences. The Major Sequence Professional Level offers the opportunity for students to obtain a professional degree suitable for a career in Economics, business or the public sector. The Intermediate Level Major Sequence is similar, but requires less specialisation in Economics courses. Students completing the Professional Level Sequence may also apply for admission to an Honours degree in Economics. Conditions for entry into the Honours program are given below.

The School of Economics also offers a major sequence in Economic History. Economic History, as a discipline, seeks to provide an understanding of the present through the study of economic and social developments in the past. Students majoring in other disciplines and those concerned with area studies will find Economic History courses that complement their major sequence. In certain circumstances, Economic History courses may also be counted towards a major sequence from another school in the Faculty of Arts and Social Sciences. Entry into an Honours program in Economic History is also possible.

Assessment in the School of Economics is by essays, tutorial participation and examination. The relative weight of each of these varies from course to course and is announced in each course at the beginning of each session.

Major Sequence Intermediate Level in Economics

For a major sequence in Economics at the intermediate level, all students must complete at least 42 units of credit in Economics courses, including: ECON2103 and ECON2104.

Economics courses must be chosen from Options (i) or Options (ii). At least one option must be selected from Options (ii).

Options (i):

ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2105	Economics of Corporations
ECON2107	Economics of Information and Technology
ECON2109	Economics of Natural Resources
ECON2111	Globalisation
ECON2112	Game Theory and Business Strategy
ECON2113	Economics of E-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2117	Economics of Tourism
ECON2127	Environmental Economics
ECON2291	Quantitative Methods A
ECON2292	Quantitative Methods B
ECON2305	Modern Asian Economic History
ECON2313	Australian Economic Development
ECON2319	Economic and Social Policy in Australia
ECON2321	Growth and Development of International Business
ECON2322	European Integration
ECON3119	Political Economy
ECON3290	Introductory Econometrics

All other Economics courses have prerequisites which are associated with other major sequences.

Options (ii):

ECON3291	Econometric Methods
ECON3101	Markets and Public Choice
ECON3104	International Macroeconomics
ECON3105	Economic Analysis of Productivity
ECON3106	Public Finance
ECON3107	Economics of Finance
ECON3109	Economic Growth, Technology and Structural Change
ECON3110	Development Economics
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
ECON3114	Superannuation and Retirement Benefits
ECON3116	International Economics
ECON3120	Economic Reasoning
ECON3121	Managerial Economics

Major Sequence Professional Level in Economics

For a major sequence in Economics at the professional level, all students must complete at least 42 units of credit in Economics courses, including:

ECON1101 and ECON1102

ECON2101 and ECON2102

Economics courses must be chosen from Options (i) or Options (ii).

At least two options must be chosen from Options (ii).

Options (i):

ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2105	Economics of Corporations
ECON2107	Economics of Information and Technology
ECON2109	Economics of Natural Resources
ECON2111	Globalisation
ECON2112	Game Theory and Business Strategy
ECON2113	Economics of E-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2117	Economics of Tourism
ECON2127	Environmental Economics
ECON2291	Quantitative Methods A
ECON2292	Quantitative Methods B
ECON2305	Modern Asian Economic History
ECON2313	Australian Economic Development
ECON2319	Economic and Social Policy in Australia
ECON2321	Growth and Development of International Business
ECON2322	European Integration
ECON3119	Political Economy
ECON3290	Introductory Econometrics
ECON3291	Econometric Methods

All other Economics courses have prerequisites which are associated with other major sequences.

Options (ii):

ECON3101	Markets and Public Choice
ECON3104	International Macroeconomics
ECON3105	Economic Analysis of Productivity
ECON3106	Public Finance
ECON3107	Economics of Finance
ECON3109	Economic Growth, Technology and Structural Change
ECON3110	Development Economics
ECON3114	Superannuation and Retirement Benefits
ECON3116	International Economics
ECON3120	Economic Reasoning
ECON3121	Managerial Economics

Students may count up to 60 units of credit in ECON courses within the total required by the BA degree.

Major Sequence in Economic History

Students may undertake either a Level 1 major or an Upper Level major in Economic History. A major sequence consists of at least 36 units of credit in courses offered in Economic History, of which no more than 12 units of credit may be from Level 1 courses. In order to enrol in a 6 units of credit Upper Level course in Economic History a candidate must have passed 36 Level 1 units of credit in Arts and completed any specific prerequisite course or courses listed.

Level 1 Courses

ECON1101	Microeconomics 1	S1 & S2
ECON1102	Macroeconomics 1	S1 & S2
ECON1301	Australia in the Global Economy	S1
ECON1302	Australia and the Asia-Pacific Economies	S2

Upper Level Courses

ECON2305	Modern Asian Economic History	S1
ECON2313	Australian Economic Development	S1
ECON2319	Economic and Social Policy in Australia	S1
ECON2321	Growth and Development of International Business	S1
ECON2322	European Integration	S2

Honours in Economics (Arts)

Students intending to do Honours in Economics should be completing ECON1101, ECON1102, ECON2101, ECON2102, ECON2291, ECON2292, ECON3290, ECON3291 and obtain at least an average of Credit or better in Upper Level courses. They then take ECON4120 Economics Honours (Arts) in their fourth year.

Honours in Economic History (Arts)

In order to enter Year 4 Honours, a candidate must have completed 36 units of credit in Economic History plus ECON1101 and ECON1102:

1. ECON1101 + ECON1102 - 12 units of credit.
2. Five Upper Level courses in Economic History - 30 units of credit.
3. 1 other Upper Level course from the School of Economics - 6 units of credit.

Students take ECON4321 Economic History 4 Honours.

Level 1

ECON1101	Microeconomics 1	S1 & S2
ECON1102	Macroeconomics 1	S1 & S2
ECON1301	Australia in the Global Economy	S1
ECON1302	Australia and the Asia-Pacific Economies	S2

Upper Level

Economics

ECON2101	Microeconomics 2	S1
ECON2102	Macroeconomics 2	S2
ECON2103	Business and Government	S2
ECON2104	Applied Macroeconomics	S1
ECON2105	Economics of Corporations	S2
ECON2107	Economics of Information and Technology	S1
ECON2109	Economics of Natural Resources	S1
ECON2111	Globalisation	S2
ECON2112	Game Theory and Business Strategy	S1
ECON2113	Economics of E-Commerce	S2
ECON2116	Economics of Japanese Business and Government	S1
ECON2117	Economics of Tourism	S1
ECON2127	Environmental Economics	S2
ECON2291	Quantitative Methods A (Arts)	S1 & S2

ECON2292	Quantitative Methods B (Arts)	S1 & S2
ECON3101	Markets and Public Choice	S1
ECON3104	International Macroeconomics	S1
ECON3105	Economic Analysis of Productivity	S2
ECON3106	Public Finance	S2
ECON3107	Economics of Finance	S1
ECON3109	Economic Growth, Technology and Structural Change	S1
ECON3110	Development Economics	S2
ECON3112	The Newly Industrializing Economies of East Asia	S2
ECON3113	Economic Development in ASEAN Countries	S1
ECON3114	Superannuation and Retirement Benefits	S2
ECON3116	International Economics	S2
ECON3119	Political Economy	S2
ECON3120	Economic Reasoning	S2
ECON3121	Managerial Economics	S1
ECON3290	Introductory Econometrics	S1
ECON3291	Econometric Methods	S2

Economic History

ECON2305	Modern Asian Economic History	S1
ECON2313	Australian Economic Development	S1
ECON2319	Economic and Social Policy in Australia	S1
ECON2321	Growth and Development of International Business	S2
ECON2322	European Integration	S2

Honours

ECON4120	Economics Honours (Arts)	S1 & S2
ECON4321	Economic History 4 Honours	S1 & S2

Education

Coordinator: A/Prof Paul Chandler

Administrative Officer: Nancy He

Administrative Assistant: Jacinta d'Souza

Practicum Administrator: Michelle Kubie

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Tel: (02) 9385 1977/1988

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As an area of study, Education crosses the boundaries between a number of disciplines including aspects of philosophy, sociology and psychology, and addresses their interaction with the learning and teaching process. The School of Education offers a range of courses to all students in the Faculty. While some Education courses are compulsory for students in the combined Education programs (BA BEd, BMus BEd, BA(Dance) BEd, BSc BEd), they are also available to students with an interest in education who are not undertaking teaching programs. For further details or special permission to have prerequisites waived, consult the School of Education.

1. Bachelor of Arts (BA) with an Education major

A major sequence in Education comprises

42 units of credit including:

12 Level 1 units of credit (EDST1101 and either EDST1103 or EDST1104) and

30 units of credit chosen from: EDST2030, EDST2032, EDST2041, EDST2044, EDST2045, EDST2046, EDST2052, EDST2053, EDST2054, EDST2060, EDST2070, EDST2090, EDST4081, EDST4093, EDST4095.

2. Bachelor of Arts Bachelor of Education (BA BEd)

Students in the combined BA BEd program should follow the sequence of core and elective courses shown below.

Level 1 Courses

12 units of credit from Level 1 courses

EDST1101	Educational Psychology 1	S1
and either		
EDST1103	Educational Psychology 2	S2
or		
EDST1104	Social Perspectives in Education	S2

Upper Level Elective Courses

18 units of credit from Upper Level courses:

EDST2030	History, Philosophy and Science Teaching	S2
EDST2032	Philosophical Issues in Education	S2
EDST2041	Stress and Anxiety in Students and Teachers	S1
EDST2044	Motivation in Learning and Teaching	S2

EDST2045	Teacher Effectiveness, Research and Practice	S1
EDST2046	Language and Literacy in the Classroom	S1
EDST2052	Relationships between Personality, Mood, Motivation and Learning	S1
EDST2053	Human Variation and Education	S2
EDST2054	Managing the Classroom Environment	S1
EDST2060	Educational Programs and Curricula for Intellectually Gifted Students	S2
EDST2070	Culture, Identity and Education	S1
EDST2090	Student Learning, Thinking and Problem Solving	S2
EDST4081	Professional Issues in Teaching	S1
EDST4093	Special Education	S1
EDST4095	Gifted and Talented Students: Recognition and Response	S1

The following Year 3 and 4 courses are compulsory for all **BA BEd** students.

Year 3 Compulsory Courses

EDST3090	Introductory Teaching Experience	S1
EDST4095	Gifted and Talented Students: Recognition and Response	S1
EDSTXXXX	Appropriate Method Course	S1

Year 4 Compulsory Courses

EDST4081	Professional Issues in Teaching	S1
EDST4092	Computer Skills for Teachers	S1
EDST4093	Special Education	S1
EDST4094	Teaching Experience	S2

Method Courses

EDST4121	Chinese Method 1	S1
EDST4122	Chinese Method 2	S2
EDST4125	Drama Method 1	S1
EDST4126	Drama Method 2	S2
EDST4127	English Method 1	S1
EDST4128	English Method 2	S2
EDST4129	English Double Method 1*	S1
EDST4130	English Double Method 2*	S2
EDST4131	Literacy/English as a Second Language Method 1	S1
EDST4132	Literacy/English as a Second Language Method 2	S2
EDST4133	French Method 1	S1
EDST4134	French Method 2	S2
EDST4135	Geography Method 1	S1
EDST4136	Geography Method 2	S2
EDST4137	German Method 1	S1
EDST4138	German Method 2	S2
EDST4141	History Method 1	S1
EDST4142	History Method 2	S2
EDST4145	Indonesian Method 1	S1
EDST4146	Indonesian Method 2	S2
EDST4147	Japanese Method 1	S1
EDST4148	Japanese Method 2	S2
EDST4149	Mathematics Method 1	S1
EDST4150	Mathematics Method 2	S2
EDST4151	Science Method 1	S1
EDST4152	Science Method 2	S2
EDST4153	Spanish Method 1	S1
EDST4154	Spanish Method 2	S2
EDST4157	Computing Studies Method 1	S1
EDST4158	Computing Studies Method 2	S2
EDST4161	Economics and Business Studies Method 1	S1
EDST4162	Economics and Business Studies Method 2	S2
EDST4163	Junior HSIE Method 1	S1
EDST4164	Junior HSIE Method 2	S2

*Only available in program 5560.

Honours Level

The prerequisites for entry to the Education Honours program are: 42 units of credit in EDST courses, plus 12 units of credit in approved courses offered by other schools, at an average of credit level or better.

EDST4000	Education Honours Full-Time
EDST4050	Education Honours Part-Time

English

Head of School: A/Prof Sue Kossew

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English is a discipline for students with a special interest in English literature and language. The study of English is not compulsory within the Faculty of Arts and Social Sciences. Therefore, courses within the School of English are planned for students who have a genuine interest in English and want to develop a special ability in it, including the ability to read perceptively and to write good English, and the ability to write creatively.

Students who have successfully completed English at Level 1 (6 Level 1 units of credit) may enrol in Level 2 English courses without necessarily pursuing a major in English. (Arts and Social Science students are only allowed to count 12 English Level 1 units of credit towards their degree.)

The usual prerequisite for enrolment in a Level 2 English course is a Pass in one Level 1 English course. The choices of courses in Level 1 for 2006 are: ENGL1001 Ways of Writing: An Introduction to Literary Genres, ENGL1006 Imagining the City, ENGL1007 The Canon of English Literature and ENGL1009 Literature of Revolution. A student who has not completed 6 Level 1 units of credit but is interested in one or more of our Level 2 courses may seek the special permission of the Head of School to have the prerequisite waived. In considering such requests, the School gives strong preference to a candidate with a Credit or higher result in a related discipline.

Major Sequence

Any student who wishes to gain a major sequence in English must complete 6 Level 1, 24 Level 2 and 12 Level 3 (or 12 Level 1, 18 Level 2 and 12 Level 3) units of credit in English. Students undertaking a major sequence are permitted to enrol in other courses offered by the School which are additional to the requirements of their basic major sequence.

Honours Entry

Students may choose one of two available Honours programs.

1. Honours in English (Research)

The normal entry requirement for a student seeking admission to the Honours Program in English is a minimum of 54 units of credit in English which must include 6 or 12 Level 1 units of credit, 30 or 24 Level 2 units of credit and 18 Level 3 units of credit. The School also requires students to have an average of 70% or better in all previous ENGL courses.

With the permission of the Head of School, a student who is studying a combined Arts degree (e.g. BA LLB, BA BEd) may substitute one related 6 unit course from another discipline.

2. Combined Honours (Research)

The Combined Honours Program allows a student to undertake the Honours year in both English and another discipline. The normal School of English entry requirement for a student seeking admission to a Combined Honours Program is 48 units of credit in English including at least 6 Level 1 units of credit, at least 12 Level 3 units of credit and an average of 70% or higher.

Entry into the Combined Honours program is subject to the approval of both the Head of the School of English and the Head of the other School concerned.

Assessment

In all English courses, assessment is by a combination of the following: essays, class tests, tutorial participation, tutorial presentation, and examinations. Further details of assessment will be available at the first class in each course.

Level 1

ENGL1001	Ways of Writing: An Introduction to Literary Genres	S1
ENGL1006	Imagining the City	S1
ENGL1007	The Canon of English Literature	S2
ENGL1009	Literature of Revolution	S2

Upper Level

Level 2

ENGL2101	Women on the Shakespearean Stage	S2
ENGL2104	Poetry, Virtue, Corruption: Milton to Burns	S1
ENGL2206	Nineteenth Century Prose	S1
ENGL2321	Twentieth Century: Modernism & Modernity	S2
ENGL2340	Contemporary Irish Literature	S2
ENGL2422	Frontiers and Crossings	S1
ENGL2460	Refiguring Dreams: Twentieth Century American Literature	S2

ENGL2520	Twentieth Century Australian Literature	S1
ENGL2621	Contemporary Australian Women Writers	S2
ENGL2821	Visual Communication	S2
ENGL2921	Creative Writing A	S1
ENGL2930	Professional Writing	S2

Level 3

ENGL3122	Jane Austen in Context	S2
ENGL3320	Modernism: Joyce	S1
ENGL3423	African Resistance Writing	S1
ENGL3442	Narrative	S2
ENGL3651	Contemporary Critical & Cultural Theory	S2

Honours Level

ENGL4000	English Literature Honours (Research) Full-Time
ENGL4050	English Literature Honours (Research) Part-Time
ENGL4500	Combined English Literature Honours (Research) Full-Time
ENGL4550	Combined English Literature Honours (Research) Part-Time

Environmental Studies**Coordinators:**

Dr Paul Brown, School of History & Philosophy of Science

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The Environmental Studies program is designed for students who wish to undertake a major sequence concentrating on the historical, theoretical, and policy implications of the human construction and transformation of the environment. Honours and Combined Honours in Environmental Studies are also available (see below).

Major Sequence

The interdisciplinary program in Environmental Studies constitutes a stand alone major, with the following requirements:

Level 1

24 Level 1 units of credit in Arts. There are no compulsory Level 1 courses. However, a typical program would include:

HPSC1400	Science, Technology, Society and Environment	S1
HPSC1500	Understanding Environmental Controversy	S2

The attention of students is also drawn to other Level 1 courses that may be of particular relevance to this major sequence, as follows:

AUST1003	Paradise Lost: Australian Environmental History	S1
POLS1014	Global Politics and the Environment	S2

and courses offered under the Geography program in the Faculty of Science.

Upper Level

For a pass degree you must have a total of **42 units of credit at Upper Level**, from the courses listed below. Note that the core course is compulsory and that you must also take at least one of the fundamental knowledge courses. Apart from the core course, you must also include at least one other course numbered with a '3000' code.

Core Course (compulsory and normally taken in the third year of study):

HPSC3500	Society and Environmental Process: Botany Bay	S2

Fundamental knowledge courses (you must take at least one)

HPSC2500	Environment, Technology and Politics	S1
HPSC2550	Sustainable Development, Globalisation, and the Third World	S1

Electives

ARTS2000#	Arts and Social Sciences Internship	X1 S1 X2 S2
HIST2039	Environmental History	S2
HPSC2750	Energy and its Politics*	
HPSC2881	Cultural Heritage Management	S2
HPSC3150	Life Science in the Twentieth Century	S2
HPSC3920	Reading Option (must be an Environmental topic)	X1 S1 X2 S2

PHIL2418	Bioethics*	
PHIL2420	Environmental Ethics	S1
PHIL2422	Biopolitics and Biotechnology*	
PHIL2424	Human Nature and Technology	S1
SLSP2002#	Policy Analysis Case Studies	S2
SOCA2104	Technology, Work, Culture	S1
SOCA2204	Pacific Islands Research Fieldwork	S2
SOCA3204	Modernity & Development in the Pacific Islands*	
SOCA3211	Development and Modernity	S2
SOCA3212	Environment, Society and Culture	S1
SOCA3704	Social Movements and Society: Current Debates*	
SPAN2418	Amazonia*	

and, by approval of the Environmental Studies Coordinator, selected courses offered under the Geography program in the Faculty of Science.

Please check school entries to confirm availability.

May be included subject to agreement of Environmental Studies Coordinator that the course has appropriate environmental content.

* These courses run in alternate years and will not be offered in 2006.

Honours Level

Prerequisite: 1. At least 54 units of credit from the above list of nominated courses for the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one fundamental knowledge course, and may include only two of the Level 1 courses recommended above. 2. Permission of the Environmental Studies Honours Coordinator.

Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project. Environmental Studies Honours is coordinated by the School of History and Philosophy of Science.

HPSC4510	Environmental Studies Honours (Research) Full-Time
HPSC4520	Environmental Studies Honours (Research) Part-Time

Honours in Environmental Studies may also be combined with Honours study in a school or department. Typical combinations are with History and Philosophy of Science, Sociology and Anthropology, History, Geography, Politics and International Relations or Philosophy. For combined honours the above assessment scheme may vary depending on the requirements of the participating school or department.

Prerequisite for Combined Honours: 1. Combined Honours prerequisites in a discipline. 2. At least 48 units of credit from the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one fundamental knowledge course, and may include only two of the Level 1 courses recommended above. 3. Permission of the Environmental Studies Honours Coordinator.

HPSC4500	Combined Honours (Research) in Environmental Studies Full-Time
HPSC4550	Combined Honours (Research) in Environmental Studies Part-Time

European Studies

Coordinator: TBA, Centre for European Studies

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Tel: (02) 9385 2325

Email: TBA

Website: www.arts.unsw.edu.au/euro/

Studying Europe is not a 'cultural cringe'; it is an essential part of defining Australia's role as a predominantly "European" country located in the Asia-Pacific. Any attempt to define Australian identity must be based not only on a new relationship with our neighbours, but on a critical understanding of our European heritage and the continuing dialogue with European thought and practice. The momentous changes which are taking place in Eastern and Western Europe will have an extraordinary impact on world developments over the next years, and on the part Australia will play in them.

EURO courses are designed to provide an interdisciplinary European context which addresses basic issues and problems in the study of European culture and society, seen from the perspective of current attempts to establish a new role for a united Europe. They focus both on the enormous contribution of the European Enlightenment to our concepts of freedom, humanity and citizenship, and its troubled relationship to the

realities of European world domination and power politics. The “New Europe” has become an economic power second only to the United States; will it be able to resolve these dilemmas, and regain some kind of moral and political leadership in world affairs as well? We can learn much from both Europe’s failures and its achievements, especially the astonishing success of European integration in overcoming centuries-old hostilities, and its development of new political structures more appropriate to representing cultural diversity within a rapidly globalising economy.

EURO courses are an ideal complement to majors in history, philosophy, politics and sociology with a European ‘focus’, or in English or European languages. Courses are offered at both Level 1 and Upper Level; they are taught in English, require no previous knowledge of other languages, and are available to all students enrolled in the Faculty.

The program also offers a major sequence. It requires the completion of seven EURO courses (42 units of credit). You may, however, request the Coordinator to approve the substitution of other appropriate courses focusing on Europe up to a total of 18 units of credit. A major sequence in European Studies is a requirement for the **Bachelor of International Studies** degree in **European Studies** (program **3424**), which is described in the **Program Rules and Information** section of this Faculty entry.

Students who wish to specialise in European Studies are encouraged to learn a relevant European language.

The European Studies notice-board is located opposite the Centre for European Studies (MB G64).

Major Sequence

A minimum of 42 units of credit in European Studies, including at least 30 units of credit in Upper Level courses.

Honours Level

Combined Honours (recommended): Students must satisfy the single Honours prerequisite for the School concerned and have completed a major in EURO with an average of 70%. They are required to present a thesis on a cross-disciplinary topic approved by the Coordinator and the relevant Head of School.

Single Honours: This program is primarily intended for students enrolled in combined degrees who are unable to meet the requirements for Combined Honours. The prerequisite is a WAM of 70% in the EURO major and related courses. Students must complete a thesis on a cross-disciplinary topic and a program of coursework negotiated between the program authority and the appropriate school(s).

Level 1

EURO1000	The New Europe A	S1
EURO1001	The New Europe B	S2

Upper Level

EURO2000	Concepts of Europe	S1
EURO2201	Text Workshop A*	S2
EURO2311	The Attractions of Communism*	S1
EURO2331	Understanding Nazi Germany	S2
EURO2410	Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution	S2
EURO2411	Spain: From Loss of Empire to European Integration	S1
EURO2482	Europe, 1914-1945: Dark Continent?	S2
EURO2483	Decadence, Dada & All That Jazz	S1
EURO2600	European Integration	S2
EURO2700	What is Postcommunism?	S1
	Central and Eastern Europe after 1989	S1
EURO3000	Evidence and Interpretation	S1
EURO3001	Barbarians, Peasants & Vampires	S1
EURO3900	Advanced Program A	S2
EURO3901	Advanced Program B	S2

*Subject to staff availability.

Honours Level

EURO4000	Honours (Research) in European Studies F/T
EURO4050	Honours (Research) in European Studies P/T
EURO4500	Combined Honours (Research) in European Studies F/T
EURO4550	Combined Honours (Research) in European Studies P/T

French

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French is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. The program includes courses in Language and Linguistics, Literature and Thought, French Culture and Society and Francophone studies. French is the language of instruction in most courses.

The program has a flexible entry-point policy, which allows students to enrol in the language program that builds on their existing language skills. Students with prior knowledge of French sit for a placement test in order to gain entry to an appropriate language course.

Major Sequence

Major sequences in French require 42 units of credit in FREN courses including at least 12 units of credit from upper level French electives. One approved course with MODL, EURO or LING prefix may be credited towards a French major. Students completing the French language core with FREN3104 will be recognised as having completed the French Advanced Program.

Honours Level

Prerequisite: At least 54 units of credit, including FREN3102 or higher language core, and FREN3910 at an average of at least 70%.

With permission of the Head of Department, Honours students who started from FREN1101 may arrange to write their Honours thesis in English rather than French. Combined Honours requires 48 units of credit in French including FREN3910.

Language Core

FREN1101	French Language and Culture 1A	S1
FREN1102	French Language and Culture 1B	S2
FREN2101	French Language and Culture 2A	S1
FREN2102	French Language and Culture 2B	S2
FREN3101	French Language and Culture 3A	S1
FREN3102	French Language and Culture 3B	S2
FREN3103	French Language and Culture 4A	S1
FREN3104	French Language and Culture 4B	S2

Upper Level Electives

FREN3105	French Today	S1
FREN3106	Discourse Studies: Media, Politics & Society	S2
FREN3210	French Prose Fiction	S2
FREN3211	Special Reading Program	S1 or S2
FREN3214	Modern French Poetry	S1
FREN3312	French Cinema and Society	S1

Advanced Upper Level Courses

FREN3901	Reading Program 1 (Advanced)	S1 or S2
FREN3910	Honours Preparatory Seminar	S2

Honours Level

FREN4000	French Honours (Research) Full-Time
FREN4050	French Honours (Research) Part-Time
FREN4500	Combined French Honours (Research) Full-Time
FREN4550	Combined French Honours (Research) Part-Time

Geography

Coordinators:

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Geography is the study of social and environmental relationships. The cultural significance of geography lies in its contribution to an understanding of the total environment. Geographers are employed as professionals in urban management, regional planning, and environmental assessment.

First year courses involve systematic studies of the physical, human, and technological basis of geography. There is a progressive specialisation in the following years, with an emphasis on field observation, data handling, policy and management.

Many courses in geography include laboratory and field work, involving the use of qualitative and quantitative techniques. Assessment in Geography is normally by a combination of coursework and examinations, although the procedure varies between courses.

Major Sequence

At least 6 Level 1 units of credit plus another 36 Upper Level units of credit in GEOH or GEOS courses, including GEOH2001 (up to 12 units of credit of Social Science and Policy courses can be counted towards a Geography major).

Honours (Research) Entry

Students must satisfy Faculty of Arts and Social Sciences requirements for entry to Honours programs. They must have obtained at least 6 Level 1 units of credit in GEOH or GEOS, and have completed SLSP1001. Students must complete another 42 Upper Level units of credit in GEOH or GEOS or related courses, two of which must include SLSP2001, GEOH2001 and GEOH3111. (Substitute courses can be approved by the Geography coordinators.) A minimum cumulative average at Credit grade is required for all Upper Level GEOH or GEOS courses taken.

Combined Honours (Research) Entry

At least 6 Level 1 units of credit plus another 36 Upper Level units of credit in GEOH or GEOS or related courses, including two of SLSP2001, GEOH2001 and GEOH3111. (Substitute courses may be approved by the Geography coordinators.) A minimum cumulative average at Credit grade is required for all Upper Level GEOH or GEOS courses taken.

Level 1

GEOH1601	Australian and Global Geographies	S2
GEOS1701	Environmental Systems and Process	S1

Upper Level

GEOH2001	Field Research	S1
GEOH2611	Geographies of the Asia-Pacific	S1
GEOH2641	Australian Urban Environments	S2
GEOH2801	Geographical Information Systems for Built Environment	S2
GEOH3111	Advanced Qualitative Methods for Geography	S1
GEOH3411	Special Topic	S1 & S2
GEOH3621	Place, Identity and Difference	S1
GEOH3641	Regional Australia: Geographies of Uneven Development	X2
GEOH3651	Geographies of Migration & Settlement	S2
GEOH3661	Cities and Urbanism	S2
GEOH3671	Transport, Land Use and Environment	S1
GEOH3911	Environmental Impact Assessment	S1
GEOH3921	Coastal Resource Management	S2
GEOS2711	Australian Climate and Vegetation	S2
GEOS2721	Australian Surface Environments and Landforms	S1
GEOS2811	Remote Sensing Applications	S1
GEOS2821	Geographic Information Systems	S2
GEOS3731	Catchment and Coastal Geomorphology	S2
GEOS3761	Environmental Change	S2
GEOS3811	Advanced Techniques in Remote Sensing	S2
GEOS3821	Remote Sensing & GIS Applications	S2
GEOS4721	Soil Degradation & Conservation	S1

Honours Level

Students who wish to enrol in a 48 unit of credit thesis course enrol in:

GEOH4418	Geography Honours (Research) Full-Time	S1 & S2
or		
GEOH4424	Combined Honours (Research) in Geography Full-Time	S1 & S2

Students who wish to undertake the School of Biological, Earth and Environmental Sciences (BEES) Honours program enrol in the following:

GEOS4418	Physical Geography Honours	S1 & S2
BEES4511	Professional Skills	S1
and either:		
BEES4521	Literature Review	S1

and 12 units of credit of electives approved by the BEES Honours committee or 18 units of credit of electives approved by the BEES Honours committee.

Geology

Coordinator: Dr Paul Lennox, School of Biological, Environmental and Earth Sciences

Tel: (02) 9385 8096

Email: p.lennox@unsw.edu.au

Website: www.bees.unsw.edu.au/future/geology.html

Geology is the study of the nature and evolution of our Earth. It spans many areas, including the relationship between humans and the physical environment. Geology is an important complement to other disciplines in Arts and Social Studies for those wishing to pursue careers in various areas of public and corporate policy, including resource assessment,

environmental regulation, environmental management and urban planning.

Field tutorials are an essential part of some of these courses, and may be held during weekends and/or recesses. Dates and costs are available during the first week of the course. Attendance is compulsory.

Major Sequence

A major sequence in Geology comprises:

12 Level 1 units of credit and 30 Upper Level units of credit, including at least one and not more than two Level 3 courses. MSCI6300 is considered to be a Level 3 course. Course selection must be made in consultation with the Geology program advisor.

Level 1

GEOS1111	Fundamentals of Geology	S1
GEOS1211	Environmental Earth Science	S2

Upper Level

GEOS2071	Life Through Time	S1
GEOS2101	Sedimentary Environments	S1
GEOS2171	Earth Structures	S2
GEOS2181	Earth Materials	S1
GEOS2291	Ground and Surface Water	S1
GEOS3131	Field Methods and Mapping	S1
GEOS3141	Mineral and Energy Resources	S1
GEOS3281	Environmental and Contaminant Geochemistry	S2
MSCI6200	Coastal Monitoring Techniques	S1
MSCI6300	Coastal Environment Assessment	S1

German Studies

Coordinator: Dr Bettina Boss

Tel: (02) 9385 3649

Email: german@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/german/german.html>

German Studies is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. Language study and the study of literature and linguistics are integrated in the German Studies program. Seminars in German literature and civilisation support the development of language proficiency and communicative competence. Practical language work involving a wide range of topics contributes to an increased awareness and understanding of the forces that have shaped the development of modern German speaking societies.

The program has a flexible entry-point policy, which allows students to enrol in the language program that builds on their existing language skills. Students are advised to consult the German Studies staff to plan their entry point in the language sequence.

Note: Students with any proficiency must consult the staff in German Studies prior to enrolment, unless they have taken German in the previous session at UNSW. Please see: <http://languages.arts.unsw.edu.au/main/placetest.html>

Major Sequence

Major sequences in German Studies require 42 units of credit in GERS courses. Students completing the German language core with GERS3701 will be recognised as having completed the German Studies Advanced Program.

Honours Level

Entry into the Honours program requires 54 units of credit in German Studies, including GERS3900 and GERS3901, with an average of at least 70%.

Combined Honours requires 48 units of credit in German Studies, including GERS3900, with an average of at least 70%.

Language Core

GERS1400	Introductory German 1	S1
GERS1401	Introductory German 2	S2
GERS2400	Intermediate German 1	S1
GERS2401	Intermediate German 2	S2
GERS3410	Advanced German 1	S1
GERS3411	Advanced German 2	S2
GERS3700	Advanced German 3	S1
GERS3701	Advanced German 4	S2

Seminar Courses

GERS3800	Modernism and Cultural Innovation in Weimar Germany	S1
GERS3801	Language and Society in the German-speaking Countries	S2

GER3802	German Culture and Society: 19 th and 20 th Century	S1
GER3803	Post-war German Literature and Culture: Hans Magnus Enzensberger	S2

Advanced Upper Level Courses

These courses are compulsory for students intending to proceed to Honours.

GER3900	German Option 1	S1
GER3901	German Option 2	S2

Honours Level

GER4000	German Honours (Research) Full-Time	
GER4050	German Honours (Research) Part-Time	
GER4500	Combined German Honours (Research) Full-Time	
GER4550	Combined German Honours (Research) Part-Time	

Greek

Coordinator: Dr Eleni Amvrazi

Office: Room 231, Morven Brown Building

Tel: (02) 9385 3649

Email: greek@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au>

Greek Studies is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. Greek Studies provide students with proficiency in spoken and written Greek through practical language work and an understanding of the way Greek society has developed through the study of Greek literature and history and culture.

The program has a flexible entry-point policy, which allows students to enrol in the language program that builds on their existing language skills. Students are advised to consult the Greek Studies staff to plan their entry point in the language sequence.

Modern Greek programs are also offered by **correspondence**. The correspondence program provides an opportunity for students who have full-time work commitments or timetable clashes to study Greek.

Note: Students with any proficiency in Greek must consult the Greek Studies staff prior to enrolment, unless they have taken Greek in the previous session at UNSW. Please see: <http://languages.arts.unsw.edu.au/main/placetest.html>

Major Sequence

Major sequences in Greek Studies require 42 units of credit in GREK courses including at least four consecutive language courses and GREK3506. Students completing the Greek language core with GREK3402 will be recognised as having completed the Greek Studies Advanced Program.

Honours Level

Intending Honours students are recommended to contact the Greek Studies staff at an early stage in their undergraduate studies to discuss their selection of programs and their proposal for the Honours research project. For entry to the Greek Honours program, the completion of 54 units of Greek courses, including GREK3900 and GREK3901, with an average of 70% is required. The entry for Combined Honours is the completion of 48 units of credit, including GREK3900 and GREK3901, with an average of 70%.

Language Core

GREK1301	Introductory Modern Greek 1A	S1
GREK1302	Introductory Modern Greek 1B	S2
GREK2301	Intermediate Modern Greek 2A	S1
GREK2302	Intermediate Modern Greek 2B	S2
GREK3301	Advanced Modern Greek 3A	S1
GREK3302	Advanced Modern Greek 3B	S2
GREK3401	Advanced Modern Greek 4A	S1
GREK3402	Advanced Modern Greek 4B	S2

History and Culture Courses

GREK3506	The Modern Greek World (1453-present day)	S1

Electives

GREK3500	Greek Traditional Culture	S2
GREK3501	Pandora's Box	S1
GREK3502	Greek Women Writers	S2
GREK3503	The Modern Greek Experience	S1
GREK3504	Greek Music: From Homer to Haroula	S2
GREK3505	Born to Purple: The Byzantine World (330-1453)	S1

Advanced Upper Level Courses

GREK3900	Culture, Ethnicity & Identity in Greek Australian Literature	S1
GREK3901	The History and Development of the Greek Language	S2

Honours Level

GREK4000	Modern Greek Studies Honours (Research) Full-Time	
GREK4050	Modern Greek Studies Honours (Research) Part-Time	

History

Coordinator: Associate Professor Rae Frances

School Office: Room 351, Morven Brown

Tel: (02) 9385 2343

Email: history@unsw.edu.au

Website: <http://history.arts.unsw.edu.au/>

The School of History offers a variety of Level 1 and Upper Level courses, giving students a wide range of options at all levels. Courses are mainly concerned with aspects of modern history and related to periods and themes in Australian, Asian, European, Middle Eastern and American history. Ancient History is taught, both as part of the World History courses and in a few specialist courses. General theories and problems of historical explanation are also studied, as well as techniques of researching and writing history.

Class contact in most courses offered is three hours per week. Level 1 courses offered in each of the following fields – Australian, European or world history – can be taken separately or as a complementary pair of courses over two sessions. (Details and timetables of lectures are available from the School of History.) Most of a history student's working time, however, is spent in the University library or in private study, preparing papers for tutorials and seminars, and writing the required essays.

Assessment in each course usually involves one essay and a written tutorial contribution. Most courses also use end of session tests as a form of assessment. For details of assessment in particular courses, consult the School of History Handbook or individual course guides.

Details of a major in History, and of the requirements for entry into Honours (4th year), are listed below. Under Faculty rules: (i) a student may complete only two Level 1 History courses (12 Level 1 units of credit), and (ii) for entry into Upper Level courses in History, students should have completed 36 units of credit.

The study of History develops important skills in research, interpretation, evaluation of evidence, reasoning and writing. Study at Honours or postgraduate level further refines these skills and permits students to demonstrate an ability to undertake independent and original research and to communicate the results of this research clearly and persuasively.

Major Sequence

A major sequence in History consists of at least 42 units of credit in courses offered by the School of History. Students enrolling in the Faculty of Arts and Social Sciences from 2005 and wishing to complete a major in History must include at least two 3000 Advanced upper level courses. In order to enrol in one of these 3000 level courses you need to have completed at least 12 History units of credit in 2000 level courses (or other courses approved by the Head of School). Pre-Honours courses, which are distinguished by the prefix HIST39++, may be included in this Major requirement. However, these courses are restricted to students with a credit average (or better) in History.

Honours Entry

Students must satisfy Faculty of Arts and Social Sciences requirements for entry to Honours programs, and must have obtained at least 54 units of credit at an average of 70% or better in the School of History, including 6 units of credit from the Pre-Honours HIST3900 courses.

For entry to a Combined Honours program, students must have obtained at least 48 units of credit at an average of 70% or better in the School of History including 6 units of credit from the HIST3900 courses.

Level 1

HIST1003	The Fatal Shore: Aborigines, Immigrants and Convict Society	S1
HIST1004	Making Australia 1850-1901: Land, People and Culture	S2
HIST1010	Introducing Southeast Asia	S1
HIST1011	The Emergence of Modern Europe (A)	S1
HIST1012	The Emergence of Modern Europe (B)	S2
HIST1014	Enter the Dragons: Continuity and Change in East Asia	S2

HIST1015	The 60s: Australia and the United States	S2	HIST3904	Going Public: Public History and the Historian	S2
HIST1016	World History: The Big Picture	S1	HIST3905	Evidence and Interpretation: Controversies in European History	S1
HIST1020	Women, Gender and World History	S1			
HIST1021	World History: The Twentieth Century	S2	HIST3907	Clio's Craft: Writing Feminist Histories	S2
HIST1030	The Modern Jewish Experience: Emancipation to the Holocaust	S1	HIST3912	Researching and Writing History	S2
HIST1031	The Modern Jewish Experience: Nationalism and Statehood	S2	Honours Level		
Upper Level			HIST4000	History Honours (Research) Full-Time	
HIST2015	Women in the Modern World	S2	HIST4050	History Honours (Research) Part-Time	
HIST2016	Film in History	S2	HIST4500	Combined History Honours (Research) Full-Time	
HIST2019	Identity, Culture and Politics: Ireland and Australia in the 20th Century	S2	HIST4550	Combined History Honours (Research) Part-Time	
HIST2025	Slavery and Freedom: American History 1750-1890	S1	History and Philosophy of Science		
HIST2027	Inventing Australia: Race, Nation, Identity, 1901-1949	S1	Coordinator: Dr Nicholas Rasmussen, School of History & Philosophy of Science		
HIST2028	Australia Since World War 2	S2	School Office: Room LG19, Morven Brown Building		
HIST2041	Australian Sport: History and Culture	S1	Tel: (02) 9385 2356		
HIST2045	Modern America	S1	Email: n.rasmussen@unsw.edu.au		
HIST2049	Working Lives: Historical Perspectives	X1	Website: http://hps.arts.unsw.edu.au/		
HIST2054	Modern Japan: Political Culture, Popular Culture	S2	History and Philosophy of Science (HPS) is the field that deals with the nature, history, social shaping and social impacts of science, technology and medicine. Courses in the School of HPS* therefore cover a number of related themes: the historical origins and philosophical foundations of modern science; the social, political and economic dimensions of technological change; the history and politics of medicine and health, as well as contemporary environmental studies, environmental policy and management. Courses in HPS make ideal complements to courses in intellectual and social history, philosophy, sociology, politics and international relations, psychology and public policy.		
HIST2055	Modern India	S2	While not everyone is trained in science or engineering, everybody is affected by science and technology in their private and working lives. Issues concerning the impact and risks of technological and scientific change are inescapable. HPS courses provide critical and contextual understanding of these issues, both for students of humanities and social sciences, as well as natural sciences, medicine and engineering.		
HIST2059	The Modern Olympics	S2	No previous study of mathematics or science is required. Entry to most Upper Level courses is possible without having studied Level 1 HPSC courses.		
HIST2060	(Un)Making the Third World: History & Global Development B	S1	<i>*The School of History and Philosophy of Science was previously named the School of Science and Technology Studies. Courses in the School of History and Philosophy of Science, coded HPSC, replace courses in the two streams previously offered by the School of Science and Technology Studies (HPST and SCTS).</i>		
HIST2061	(Un)Making the Third World: History & Global Development A	S2	Major Sequence		
HIST2074	Holocaust and Genocide in Historical Perspective	S2	For students commencing in 2002 or earlier, a major sequence in History and Philosophy of Science consists of at least 42 units of credit in HPSC courses (or their HPST and SCTS predecessors), of which no more than 12 units of credit may be from Level 1 courses.		
HIST2078	In the Firing Line: Australians go to War	S2	For students commencing in 2003 or later, a major sequence in History and Philosophy of Science consists of at least 42 units of credit in HPSC courses, of which no more than 12 units of credit may be from Level 1 courses; at least 2 courses from Level 2 fundamental knowledge courses & 2 from Level 3 courses; plus at least one elective from any Upper Level HPSC course.		
HIST2090	The Transformations of Warfare	S1	By permission of the Head of School, up to 6 units of credit obtained in approved Upper Level courses in other Schools may be counted towards a major sequence.		
HIST2201	The Medieval World	S2	Interdisciplinary Programs		
HIST2202	Born to the Purple: The Byzantine World (330-1453)	S1	The School coordinates interdisciplinary programs in Environmental Studies, Cognitive Science, and the Philosophy of Science. See entries under those headings for further information.		
HIST2203	The Modern Greek World (1453 to Present Day)	S2	Level 1		
HIST2351	Chinese Civilisation, 1600 BC to 1600 AD	S1	HPSC1100	Cosmos and Culture	S1
HIST2352	Modern China, 1600-present	S2	HPSC1200	Science, Good, Bad & Bogus	S2
HIST2400	Concepts of Europe	S1	HPSC1400	Science, Technology, Society and Environment	S1
HIST2410	Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution	S2	HPSC1500	Understanding Environmental Controversy	S2
HIST2482	Europe, 1914-1945: Dark Continent?	S1	Level 2		
HIST2483	Decadence, Dada & All That Jazz: European Cultural History, 1880-1945	S2	Fundamental Knowledge Courses		
HIST2484	Europe in the Age of Revolutions	S1	HPSC2150	Darwin and the Order of Nature	S1
HIST2485	The German-Jewish Experience*	S1	HPSC2200	Philosophy of Science	S2
HIST2489	The Attractions of Communism*	S1	HPSC2300	Sociology of Science & Technology: How Science Works	S2
HIST2491	Text Workshop A*	S2			
HIST2510	The United States and Changing Global Orders	S2			
HIST2511	The United States and Conflict in the Middle East	S2			
HIST2600	Islamic Worlds: From Muhammad to the Present	S2			
HIST2662	Rome: From Kingdom to Republic	S1			
HIST2665	Early Greece: Bronze Age to Archaic Greece	S1			
HIST2666	The Expansion of Greece: Classical to Roman Greece	S2			
HIST2751	Nightlife and the Metropolis: Moulin Rouge to Rave	S1			
HIST2752	Religion in World History	S1			
HIST2760	A History of Sexualities	S2			
* Subject to staff availability.					
Advanced Upper Level Courses					
HIST3101	Understanding Nazi Germany: Origins, Structures, Explanations	S2			
HIST3102	Pre-Modern Japan: Status, Sex and Power	S1			
HIST3103	Urban Legends: The History of Sydney	S1			
HIST3106	Environmental History	S2			
HIST3108	The Mediterranean in History: From Odysseus to Club Med	S2			
HIST3109	Barbarians, Peasants, Vampires: Eastern Europe in History and Imagination	S1			
HIST3111	The Ages of Homer	S2			
Pre Honours Upper Level Courses					
HIST3900	Historiography of Southeast Asia	S2			
HIST3902	Australian History and its Constructions	S1			

HPSC2500	Environment, Technology and Politics	S1
HPSC2550	Sustainable Development, Globalisation and the Third World	S1

Branch Courses

HPSC2600	Galileo, Science & Religion	S1
HPSC2610	Computers, Brains and Minds	S2
HPSC2630	God, Life, the Universe and Everything: Science and Meaning	S1
HPSC2650	Worrying Ourselves to Death? Health, Risk & Modern Medicine	S2
HPSC2665	On Drugs: Pharmaceuticals, Medicine, and Culture	S2
HPSC2660	Cheating Death: A History of Medicine	S1
HPSC2881	Cultural Heritage Management	S2

Level 3

HPSC3100	Advanced History of Science	S2
HPSC3200	Topics in the Philosophy of Science	S1
HPSC3300	Technology & Culture	S1
HPSC3500	Society & Environmental Process: Botany Bay	S2
HPSC3920	Reading Option	X1 S1 X2 S2

Honours

Students thinking of studying for Honours in the School of History and Philosophy of Science should consult the School in session 3 of their study. A program of study will be worked out for each student according to his or her needs and interests. It is, however, possible to move to Honours at a later stage, and students wishing to do this should contact the School.

HPSC4000	History and Philosophy of Science Honours (Research) F/T	
HPSC4050	History and Philosophy of Science Honours (Research) P/T	
HPSC4200	History and Philosophy of Science Combined Honours (Research) F/T	
HPSC4250	History and Philosophy of Science Combined Honours (Research) P/T	
HPSC4510	Environmental Studies Honours (Research) F/T	
HPSC4520	Environmental Studies Honours (Research) P/T	
HPSC4500	Combined Honours in Environmental Studies (Research) F/T	
HPSC4550	Combined Honours in Environmental Studies (Research) P/T	

Indonesian Studies

Coordinator: A/Prof David Reeve

Administrative Assistant: Rosanna Cheung

Office: Room 238, Morven Brown Building

Tel: (02) 9385 1019

Email: d.reeve@unsw.edu.au

Courses in Indonesian Studies are offered both for students with no prior knowledge of the language (Beginners' level entry) and for those with HSC Indonesian (Intermediate or Advanced level entry). There are also courses available for native speakers (Professional level entry).

In order to count Indonesian Studies as a major sequence, students must complete 42 units of credit in Indonesian language and Indonesian Studies courses. Those interested in doing Honours must in addition complete two qualifying one semester courses worth 6 units of credit each in Year 2 and/or Year 3.

Major Sequences**1. Beginner's Entry level – 42 units of credit**

Year 1	UOC
INDO1001	6
INDO1002	6
Year 2	
INDO2001	6
INDO2002	6
Year 3	
INDO3001	6
INDO3002	6
plus one Indonesian Studies course	6

2. Intermediate Entry Level – 42 units of credit

Year 1	UOC
INDO2001	6
INDO2002	6

Year 2

INDO3001	6
INDO3002	6

Year 3

Three Indonesian Studies courses	18

3. Advanced Entry Level – 42 units of credit

Year 1	UOC
INDO3001	6
INDO3002	6

Year 2

INDO3035	6
INDO3500	6

Year 3

Three Indonesian Studies courses	18

Note: INDO2001 is the entry level for background speakers with limited language proficiency, including some HSC level Indonesian. INDO3001 is the entry level for background speakers with advanced language proficiency, including higher scores in HSC Indonesian.

4. Professional Entry Level – 42 units of credit

Year 1	UOC
INDO3035	6
INDO3500	6

Year 2

Two Indonesian Studies courses	12

Year 3

Two Indonesian Studies courses plus one elective	18

5. Honours Level

Students interested in gaining additional academic qualifications and a deeper knowledge of Indonesia can do a Year 4 Honours program by research. They should complete the two Pre-Honours courses INDO3900 and INDO3901 in addition to a major sequence at Credit level or better. Students thinking of studying for Honours in Indonesian Studies should consult the Department as early as possible in the course of their studies.

Indonesian Language Courses

INDO1001	Introductory Indonesian 1
INDO1002	Introductory Indonesian 2
INDO2001	Intermediate Indonesian 1
INDO2002	Intermediate Indonesian 2
INDO3001	Advanced Indonesian 1
INDO3002	Advanced Indonesian 2

Indonesian Studies Courses

INDO3035	Indonesian Popular Culture (taught in Indonesian)	S1
INDO3500	Contemporary Indonesian Society (taught in Indonesian)	S2
INDO3502	Islam in Indonesia	S1
INDO3503	Indonesian Political Culture	S2
INDO3900	Introduction to Indonesian Studies (Pre-Honours course)	S1
INDO3901	Indonesian Studies Research Methods (Pre-Honours course)	S2

Electives

HIST2053	Understanding Indonesia: Identity, Civil Rights and Jihad *
HIST2081	Traditions, Colonialisms & Revolutions: Southeast Asian Histories *

* Not offered in 2006.

Honours Level

INDO4000	Indonesian Honours (Research) Full-Time
INDO4050	Indonesian Honours (Research) Part-Time
INDO4500	Combined Indonesian Honours (Research) Full-Time
INDO4550	Combined Indonesian Honours (Research) Part-Time

International Studies

Coordinator: Professor Roger Bell, International Studies Program

Office: Room G66, Morven Brown Building

Tel: (02) 9385 2431

Email: r.bell@unsw.edu.au

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies is a four-year full-time program offered in the following five area-study concentrations: Asian Studies Plan, Development Studies Plan, European Studies Plan, Global Studies Plan, Language Studies Plan.

Students must complete the core sequence of courses (42 units of credit - 12 Level 1 and 30 Upper Level units of credit) as listed below:

Level 1

INST1100	World History A	S1
INST1200	World History B	S2
or		
INST1300	International Relations in the Twentieth Century	S1
INST1400	International Relations: Continuity and Change	S2

Upper Level

INST2200	Globalisation & Fragmentation (core)	S2
INST2300	International Law	S1
or		
INST2301	Global Governance (Not offered in 2006)	
or		
INST2302	International Security	S2
INST2400	The Theory and Practice of Development	S1
or		
INST2401	Sustainable Development, Globalisation and the Third World	S1
INST3300	Theorising International Political Economy	S1
or		
INST3301	Economic Growth, Technology and Structural Change	S1
INST3900	International Studies Advanced Seminar (core)	S2

International Studies - Asian Studies

Coordinator: Karyn Lai, School of Philosophy

Office: Room G41, Morven Brown Building

Tel: (02) 9385 1194

Email: k.lai@unsw.edu.au

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies in Asian Studies requires the completion of a sequence of 36 units of credit in Asian Studies including **ASIA1001** and **ASIA1002** (Year 1).

Level 1

ASIA1001	Introduction to Contemporary Asia	S2
ASIA1002	Introducing Southeast Asia	S1

Upper Level

ECON2116	Economics of Japanese Business and Government	S1
ECON3112	The Newly Industrialising Economies of East Asia	S2
ECON3113	Economic Development in ASEAN Countries	S1
HIST2050	Women in Southeast Asian Societies *	
HIST2054	Modern Japan: Political Culture, Popular Culture	S2
HIST2055	Modern India	S2
HIST2084	The Vietnam War/The American War *	
HIST2085	Australia's Asian Context: Resistance and Engagement *	
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia *	
HIST2351	Chinese Civilisation, 1600 BC to 1600 AD	S1
HPSC2550	Sustainable Development, Globalisation and the Third World	S1
PHIL2519	Introduction to Chinese Philosophy	S2
PHIL2520	Aspects of Chinese Thought	S2
POLS2003	The Political Development of Contemporary China	S2
POLS2014	Regional Cooperation and Conflict in Southeast Asia *	
POLS2036	Political Development in Northeast Asia	S1
SOCA3205	Modern Southeast Asia: Society and Culture *	
SPAN2430	Miracles of Modernisation/Crises of Capitalism: Asia and the Americas *	

or approved courses in CHIN, INDO, JAPN, and KORE.

* Not offered in 2006.

Note: The courses on offer vary from year to year depending on staff availability. Check the Online Handbook for course descriptions and availability.

International Studies - Development Studies

Coordinator: Michael Johnson, School of Social Science and Policy

Office: Room G29, Morven Brown Building

Tel: (02) 9385 3481

Email: michael.johnson@unsw.edu.au

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies in Development Studies requires the completion of a sequence of 42 units of credit in Development Studies including COMD1002, COMD2000, COMD2050 and ECON3110.

Level 1

First Year

COMD1001	Development Studies: The Emergence of Underdevelopment	S2
COMD1002	Development Studies: Poor World, Rich World (core)	S1

Second Year

COMD2000	The Theory and Practice of Development (core)	S1
COMD2050	Sustainable Development, Globalisation and the Third World (core)	S1
COMD2010	(Un)Making the Third World: History and Global Development B	S1
ARTS2000	Arts and Social Sciences Internship	X1 S1 X2 S2
HIST2300	Between Dictatorship and Democracy: Contemporary Southeast Asia *	
POLS2023	Globalisation and Uneven Development	S2
SOCA2210	Anthropology of Human Rights *	
SPAN3401	Colonising the Americas: The Spanish and Portuguese Empires	S1

Third Year

ECON3109	Economic Growth, Technology and Structural Change	S1
ECON3110	Development Economics (core)	S2
SOCA3104	Global Migrations, Global Refugees	S1
SOCA3106	Anthropology and Tourism *	
SOCA3204	Modernity and Development in the Pacific Islands *	
SOCA3211	Development and Modernity	S2
SOCA3212	Environment, Society and Culture	S1
SOCA3810	The Space of Terror *	

* Not offered in 2006.

Note: The courses on offer vary from year to year depending on staff availability. Check Online Handbook for course descriptions and availability.

International Studies - European Studies

Coordinator: To be advised

Office: To be advised

Tel: To be advised

Email: To be advised

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies in European Studies requires the completion of a sequence of 36 units of credit European Studies including EURO1000 and EURO1001.

Level 1

EURO1000	New Europe A	S1
EURO1001	New Europe B	S2

Upper Level

EURO2000	Concepts of Europe	S1
EURO2001	Gender Race Nature & Reason*	
EURO2002	Experience of the City*	
EURO2003	European Modernism*	
EURO2103	The Italian Renaissance*	
EURO2107	Journeys with Love and Death*	

EURO2201	Text Workshop A	
EURO2300	The German-Jewish Experience*	
EURO2301	The Attractions of Fascism*	
EURO2302	The Messiah Complex*	
EURO2311	The Attractions of Communism	
EURO2321	German Revolutions?*	
EURO2331	Understanding Nazi Germany	
EURO2401	Modern Italy*	
EURO2410	Nineteenth Century Europe	
EURO2411	Modern Spain	
EURO2433	The Russian Revolution*	
EURO2470	Modern France*	
EURO2482	Dark Continent? Europe 1914-45	
EURO2483	Decadence, Dada and All that Jazz	
EURO2500	The Russian Experience*	
EURO2504	Thatcher, Blair and Beyond*	
EURO2600	European Integration	
EURO2700	What is Postcommunism?	
EURO3000	Evidence and Interpretation	
EURO3001	Barbarians, Peasants and Vampires	
EURO3900	Advanced Program A	
EURO3901	Advanced Program B	

* Not offered in 2006.

Note: The courses on offer vary from year to year depending on staff availability. Check the Online Handbook for course descriptions and availability.

International Studies - Global Studies

Coordinator: Roger Bell, International Studies

Office: Room G66, Morven Brown Building

Tel: (02) 9385 2431

Email: r.bell@unsw.edu.au

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies in Global Studies requires the completion of a sequence of 42 units of credit in Global Studies (GLST) including **GLST1100**, **GLST2104** and **GLST3000**. A maximum of 12 Level 1 units of credit can be completed.

First Year

GLST1100	Introduction to Globalisation (core)	S1
plus one of the following:		
GLST1200	Women, Gender and World History	S1
GEOH1601	Australia and Global Geographies: Integration and Convergence	S2
PECO1001	Australia in the Global Economy	S2
SOCA1001	Cultural Identities *	

Second Year

GLST2104	Globalisation and Uneven Development (core)	S2
plus two of the following:		
GLST2101	(Un)Making the Third World: History and Global Development B	S1
GLST2102	(Un)Making the Third World: History and Global Development A	S2
GLST2103	The United States and Changing Global Orders	S1
GLST2105	Theories and Concepts of International Relations *	
ECON2111	Globalisation	S2
EURO2600	European Integration	S2
EURO2700	What is Post-Communism?	S2
HIST2085	Australia's Asian Context *	
MEFT2100	Global Media: Markets, Flows and Culture	S2
POLS2014	Regional Cooperation and Conflict in Southeast Asia *	
SOCA2101	Encountering Modernity *	
SOCA2210	Anthropology of Human Rights *	

Third Year

GLST3000	Global Studies and Global Transformations (core)	S2
plus two of the following:		
GLST3302	States, Nations and Ethnic Identities *	
GEOH3661	Cities and Urbanisation	S2
MEFT3205	Cinemas and Cultures	S2
POLS3050	Theories of Nationalism *	
SOCA3104	Global Migration, Global Refugees	S1

SOCA3106	Anthropology and Tourism *	
SOCA3703	Nationalism, Citizenship and Cultural Identity	S2
SOCA3801	The Space of Terror *	

* Not offered in 2006.

Note: The courses on offer vary from year to year depending on staff availability. Check the Online Handbook for course descriptions and availability.

International Studies - Language Studies

Coordinator: Carmen Cabot, School of Modern Languages

Office: Room 224, Morven Brown Building

Tel: (02) 9385 2354

Email: c.cabot@unsw.edu.au

Website: www.arts.unsw.edu.au/futurestudents/undergraduate/internationalstudies.html

The Bachelor of International Studies in Language Studies requires the completion of a sequence of 36 units of credit in two languages: Chinese, French, German, Greek, Indonesian, Italian, Japanese, Korean, Russian or Spanish.

Irish Studies

Coordinator: Dr Peter Kuch, School of English

Tel: (02) 9385 2298/2364

Email: p.kuch@unsw.edu.au or irish@unsw.edu.au

Website: <http://irishstudies.arts.unsw.edu.au/>

The major in Irish Studies provides an interdisciplinary exploration of Irish history, culture and society over the past two hundred years that takes particular account of Ireland's relationships with Australia and with Europe. While attention is paid to issues such as identity, ethnicity, and 'nation-building', and the history of their contestation in Ireland, the principal focus is on ways these can be situated within readings of the cultural, social and political forces that shaped Ireland's interaction with Australia and Europe. From being subject to the British Empire and thus a major source-country for the European settlement of Australia, Ireland has become a wealthy, technologically advanced, highly educated and culturally sophisticated European nation.

The Level 1 core courses offer students an understanding of the Irish contribution to the history of Australia and an understanding of contemporary Europe, of which Ireland is now part. Given the literary component of the major, students are strongly advised to enrol in either **ENGL1001** and/or **ENGL1006** and/or **ENGL1007** and/or **ENGL1009** in their first year.

Upper Level courses are taught by different schools in the Faculty and consequently the major enables students to enjoy a range of disciplinary and interdisciplinary approaches. Courses may be studied individually and, though all complement one another, all are designed to be self-contained.

Major Sequence in Irish Studies

The major in Irish Studies comprises 12 units of credit at Level 1 and 24 Upper Level units of credit.

Level 1 Core Courses

EURO1000	The New Europe A	S1
EURO1001	The New Europe B	S2
or		
HIST1011	The Emergence of Modern Europe (A)	S1
HIST1012	The Emergence of Modern Europe (B)	S2
or		
HIST1003	The Fatal Shore: Aborigines, Immigrants and Convict Society	S1
HIST1004	Making Australia 1850-1901: Land, People & Culture	S2

Upper Level Courses

IRSH2001	Irish History from 1800*	
IRSH2002	Identity, Culture and Politics: Ireland and Australia in the 20th Century	S2
IRSH2012	Contemporary Irish Literature	S2
IRSH2013	Myths of Self and Society — Irish Writing and its Relevance for Australian Society*	
IRSH2021	Contemporary Theatre	S2
IRSH2101	Ireland: States of Being, States of Mind	S2
IRSH2104	Poetry, Virtue, Corruption: Milton to Burns	S1
IRSH2410	Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution	S2
IRSH3472	Modernism: Joyce	S1

*Not offered in 2006.

Italian

Coordinator: Dr Diana Palaversich, Department of Spanish & Latin American Studies

Tel: (02) 9385 1188/1681

Email: italian@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/italian/italian.html>

Italian is currently offered at beginners' level only within the School. Students wishing to continue their studies in Italian may be able to do so by enrolling in courses offered by the University of Sydney. Students with prior Italian language knowledge may be able to commence study at a course higher than ITAL1001 at the University of Sydney.

Level 1

ITAL1001	Introductory Italian 1	S1
ITAL1002	Introductory Italian 2	S2

Japanese Studies

Coordinator: Dr Gi-Hyun Shin

Office: Room 203, Morven Brown Building

Tel: 9385 3760

Email: japankorea@unsw.edu.au

Website: www.languages.arts.unsw.edu.au/japan/japan.html

Japanese Studies is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. The program offers a range of Japanese language and non-language based courses to students, including courses in Japanese cultural studies, and professional language.

The program has a flexible entry-point policy, which allows students to enrol in the language program that builds on their existing language skills. Students with prior knowledge of Japanese sit for a placement test in order to gain entry to an appropriate language course.

Note: For students admitted in their first year of studies into JAPN2000 or higher on the grounds of ability and/or previous study, such courses will be counted as Level 1 courses in terms of degree regulations. No student will be permitted to enrol in courses carrying more than 12 Upper Level units of credit in any School/area of studies under this provision.

Major Sequence

A major sequence in Japanese Studies comprises 42 units of credit and requires (1) 24 units or more from Japanese language core or JAPN3700 series; (2) either JAPN2500 (or JAPN3900*); and (3) the remaining units from Culture and Professional Language courses. Students completing the Japanese Studies major including two or more courses from the JAPN3700 series will be recognised as having completed the Japanese Studies Advanced Program.

LOTE

Those pursuing a LOTE qualification in the BA BEd program should take 36 UOC from Language core or JAPN3700 series as well as JAPN2500 (or JAPN3900*).

Honours Level

Prerequisite: The completion of 54 units of credit, including JAPN3901 and JAPN3902 in Japanese Studies, a WAM of 65 or above in all courses, Distinction or higher in all JAPN courses, and the major with a minimum language level of JAPN3001.

Entry to the Combined Honours program requires the completion of 48 units of credit, including JAPN3901 and JAPN3902, a WAM of 65 or above in all courses, Distinction or higher in all JAPN courses, and the major with a minimum language level of JAPN3001.

Language Core

JAPN1000	Japanese Communication 1A	S1
JAPN1001	Japanese Communication 1B	S2
JAPN2000	Japanese Communication 2A	S1
JAPN2001	Japanese Communication 2B	S2
JAPN3000	Japanese Communication 3A	S1
JAPN3001	Japanese Communication 3B	S2
JAPN3400	Japanese Communication 4A	S1
JAPN3401	Japanese Communication 4B	S2

JAPN3700 Series

JAPN3700	Expressing Oneself in Japanese**	
JAPN3701	Advanced Study of Spoken Japanese**	
JAPN3702	Politeness in Interaction with (the) Japanese	S1
JAPN3703	Approaches to Japanese Discourse Analysis	S2
JAPN3704	Contact Situations in Japanese**	

Culture and Professional Language Courses

Core

JAPN2500	Introduction to Japanese Studies	S1 & S2
JAPN3900	Introduction to Japanese Studies (Advanced)*	S1

Electives

JAPN2501	Japan's Others: Assimilation, Exclusion, and Resistance**	
JAPN2510	Japan and Korea: Cultures in Conflict	S1
JAPN2513	Cultures of War and Peace in Japan**	
JAPN2600	Hospitality Japanese	S1
JAPN2700	Talking Japanese Pop Culture	S1
JAPN2701	Learning Japanese by Reading Manga	S2
JAPN3205	Business Japanese	S2
JAPN3300	Discover Japanese Grammar A	S1
JAPN3301	Discover Japanese Grammar B**	
JAPN3501	Japanese Studies Internship**	
JAPN3601	Cultural Studies and Japan	S2
JAPN3602	Gender & Sexuality in Contemporary Japan**	
JAPN3605	Japan in the World**	
JAPN3901	Introduction to Research in Japanese Studies*	S1
JAPN3902	Readings in Japanese Studies (Advanced)*	S2
HIST2054	Modern Japan: Political Culture, Popular Culture	S2
HIST3102	Premodern Japan	S1
MODL2000	Intercultural Communication	S1

*Advanced Upper Level courses usually taken by those students who are intending to enrol in Honours.

**Not offered in 2006.

Honours level

JAPN4500	Japanese Studies Honours (Research) Full-Time
JAPN4550	Combined Japanese Honours (Research) Full-Time
JAPN4555	Japanese Studies Honours (Research) Part-Time

Jewish Studies

Coordinator: Dr Julie Kalman, School of History

Office: Room 351, Morven Brown Building

Email: history@unsw.edu.au

Website: www.arts.unsw.edu.au/jewishstudies/

Jewish Studies is an interdisciplinary program focusing on the modern Jewish experience. It brings together various perspectives and approaches from History, Politics, Sociology, Literature, and Law to explore the subject of the Jews – their religion, culture and politics and their interrelations with non-Jews and the wider society – with an emphasis on the past two centuries.

Major Sequence

Students may take a major sequence in Jewish Studies as their second major, together with a major in a school-based discipline within the Faculty of Arts and Social Sciences. A major sequence consists of 36 units of credit in the Jewish Studies program, including at least 24 units of credit in Upper Level courses. With the approval of the Coordinator, up to 12 units of credit in other courses related to Jewish Studies may be counted towards the major.

Level 1

JWST1000	The Modern Jewish Experience: Emancipation to the Holocaust	S1
JWST1001	The Modern Jewish Experience: Nationalism and Statehood	S2

Upper Level

JWST2101	Holocaust and Genocide in Historical Perspective	S2
JWST2103	The German-Jewish Experience*	S1

Elective

HIST2511	United States and Conflict in the Middle East	S2

*Subject to staff availability.

Korean Studies

Coordinator: Dr Gi-Hyun Shin

Office: Room 203, Morven Brown Building

Tel: 9385 1731

Email: g.shin@unsw.edu.au

Website: www.languages.arts.unsw.edu.au/korean/korea.html

Korean Studies is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. The program offers a range of Korean language and non-language based courses to students, including courses in Korean cultural studies, and professional language.

The program has a flexible entry-point policy, which allows students to enrol in the language program that builds on their existing language skills. Students with prior knowledge of Korean sit for a placement test in order to gain entry to an appropriate language course.

Note: For students admitted in their first year of studies into KORE2000 or higher on the grounds of ability and/or previous study, such courses will be counted as Level 1 courses in terms of degree regulations. No student will be permitted to enrol in courses carrying more than 12 Upper Level units of credit in any School/area of studies under this provision.

Major Sequence

A major sequence in **Korean Studies** comprises 42 units of credit. A major sequence in Korean Studies requires: (1) the completion of at least 4 consecutive language courses; (2) the completion of KORE3001 or higher; (3) the remaining units from Culture courses. In exceptional cases, a student may take Culture courses instead of Language courses with the Department's permission. Students who complete the language core with KORE3501 or higher will be recognised as having completed the Korean Studies Advanced Program.

Honours

Prerequisite: The completion of 54 units of credit, including KORE3900 and KORE3901 in Korean Studies, a WAM of 65 or above in all courses, Distinction or higher in all KORE courses, and the major with a minimum language level of KORE3001.

Language Core

KORE1000	Korean Communication 1A	S1
KORE1001	Korean Communication 1B	S2
KORE2000	Korean Communication 2A	S1
KORE2001	Korean Communication 2B	S2
KORE3000	Korean Communication 3A	S1
KORE3001	Korean Communication 3B	S2
KORE3400	Advanced Korean A	S1
KORE3401	Advanced Korean B	S2
KORE3500	Professional Korean A	S1
KORE3501	Professional Korean B	S2
KORE3600	Korean Translation A	S1
KORE3601	Korean Translation B	S2

Culture Courses

KORE2500	Korean Civilisation and Culture	S1
KORE2600	Modern Korean Society**	
KORE2601	Gender/Politics in Korean Literature	S2
KORE2602	Korean Literature: A Survey in English**	
KORE2603	Korean Encounters and Worldly Visions**	
KORE3900	Introduction to Korean Studies (Advanced)*	S1
KORE3901	Special Topics in Korean Studies (Advanced)*	S1
JAPN2510	Japan & Korea: Cultures in Conflict	S1

*Advanced Upper Level courses usually taken by those students who are intending to enrol in Honours.

**Not offered in 2006.

Honours Level

KORE4000	Korean Studies Honours (Research) Full-Time
KORE4050	Korean Studies Honours (Research) Part-Time

Latin

Coordinator: Dr Diana Palaversich

Office: Room 244, Morven Brown Building

Tel: (02) 9385 2424/2421

Email: latin@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/latin/latin.html>

A knowledge of Latin gives students direct access to some of the greatest works of Western literature, philosophy, scientific theory and legal oratory. It can also offer significant advantages to students pursuing other areas of language study, such as linguistics, English or other modern European languages.

Level 1

LATN1000	Introductory Latin A	S1
LATN1001	Introductory Latin B	S2

Upper Level

LATN2001	Reinventing the Past: Roman Mythological Epic	S1

LATN2002	Mothers and Sons: Suetonius and Tacitus on Families	S2

Note: Latin is not available as a major sequence within the Faculty of Arts and Social Sciences.

Linguistics

Coordinator: A/Prof Peter Collins

Office: Room 231, Morven Brown Building

Tel: (02) 9385 3649

Email: linguistics@unsw.edu.au

Website: www.arts.unsw.edu.au/languages/linguistics

Linguistics is the study of human language. Its practitioners address questions such as: How do people use language in various situations? What is the biological basis for language? Is language unique to the human species? How and why do languages change? How do children learn language? What is the meaning of 'meaning'? Can machines talk? As well, linguistics provides a basis for a variety of practical applications, including the teaching and learning of foreign languages, translating and interpreting, facilitating cross-cultural communication, diagnosing and treating language disorders, providing linguistic support for such professions as law and medicine, developing language curricula in schools, improving literacy skills, generating speech by computer, producing 'plain English' documents, and so on.

Students who have successfully completed either or both of the Level 1 Linguistics courses may enrol in Upper Level Linguistics courses. A student who has not fulfilled this prerequisite but is interested in a particular Upper Level course may request the permission of the Head to have the prerequisite waived. In considering such requests, the Head will give preference to a candidate with a successful year's work in another language, or in English, or a Credit or better in another related discipline.

Major Sequence

A major sequence in Linguistics requires 12 units of credit in Linguistics at Level 1 and 30 units of credit in Upper Level courses, including at least 12 units of credit at 3000 level. Students may count up to 6 units of credit in approved Upper Level courses taught outside the Linguistics Department towards a major sequence in Linguistics. Approved courses are MODL2000 Intercultural Communication, MODL2002 Introduction to Professional Interpreting, JAPN3300 Discover Japanese Grammar A and JAPN3301 Discover Japanese Grammar B. Students who wish to count any other course from outside the Linguistics Department towards a major sequence in Linguistics should consult the Department.

Level 1

LING1000	The Structure of Language	S1
LING1500	The Use of Language	S2

Upper Level

LING2400	Language, Text and Context	S1
LING2510	Analysing Talk	S1
LING2520	Generative Grammar*	
LING2530	Visual Communication	S2
LING2540	Semantics and Pragmatics	S1
LING2551	Contemporary English Grammar	S1
LING2590	The English Language*	
LING2680	Language Universals and Linguistic Typology*	
LING2700	Social Contexts of Language Learning and Teaching	S1
LING2900	The Linguistics of Signed Languages	S2
LING3000	Analysing Talk – Advanced	S2
LING3001	Current Issues in English Grammar	S1
LING3002	Institutional Factors in Language Learning	S2
LING3003	Theoretical and Descriptive Linguistics	S2

*Not offered in 2006.

Honours Entry

Students need to have completed at least 54 units of credit (48 units of credit for Combined Linguistics Honours) at Credit level or better in Linguistics courses, including three 3000 level courses, for entry to Honours.

Note: Students are strongly advised to consult the Head on their eligibility to enter Honours programs.

LING4000	Linguistics Honours (Research) Full-Time
LING4050	Linguistics Honours (Research) Part-Time
LING4500	Combined Linguistics Honours Full-Time
LING4550	Combined Linguistics Honours Part-Time

Mathematics

Coordinator: School of Mathematics Office

Office: Room 3070, Red Centre

Tel: (02) 9385 7111

Email: info@maths.unsw.edu.au

Website: www.maths.unsw.edu.au

While Mathematics as a major study is usually taken in one of the Science, Advanced Science or Science/Arts programs, it may also be taken within an Arts program.

Students wishing to do an Honours degree in Mathematics or to specialise in one of the disciplines of Applied Mathematics, Pure Mathematics or Statistics must transfer from the Arts program to one of the Science, Advanced Science or Science/Arts programs. This should normally be done prior to commencing Year 2, but may be possible at the end of Year 2 depending on the courses selected.

First Year Mathematics

MATH1131 and MATH1231 are the standard courses and are generally selected by students who intend to pursue further studies in Mathematics. There is an assumed knowledge for these courses of HSC Mathematics Extension 1.

MATH1141 and MATH1241 are aimed at the more mathematically able students. They cover all the material in MATH1131 and MATH1231 at greater depth and sophistication. There is an assumed knowledge for these courses of HSC Mathematics Extension 2.

MATH1011, MATH1031 and MATH1041 are courses available for students who do not intend studying Mathematics beyond Level I, but whose studies require some knowledge of basic mathematical ideas and techniques. Only a very limited number of Upper Level Mathematics courses are available to students who have done these courses. There is an assumed knowledge for these courses of HSC Mathematics (this does not include HSC General Mathematics).

Higher Level Mathematics

Many courses in the School are offered at two levels. The Higher level caters for students with superior mathematical ability. Where a prerequisite is mentioned at the ordinary level, the corresponding Higher level course may be substituted.

Students with Low Mathematical Qualifications

The University organises a bridging course in Mathematics which is available for those students intending to enrol in MATH1131 who have inadequate mathematical background. The bridging course covers the gap between HSC Mathematics and Mathematics Extension 1 and is a very useful refresher course generally. The course is held at the University during February each year. Students who do not have a background equivalent to at least HSC Mathematics should not take Mathematics at UNSW.

Major Sequences in Mathematics

A major sequence in Mathematics consists of 42 units of credit, subject to the following rules.

Level I

12 units of credit (MATH1131 or MATH1141, MATH1231 or MATH1241)

Upper Level

30 units of credit in which:

- (a) at least 12 units of credit are at Level II
- (b) at least 12 units of credit are at Level III
- (c) MATH2501 and MATH2011 are compulsory
- (d) additional courses recommended at Level II are: MATH2120 and MATH2520, or MATH2801 and MATH2810

Students should also consult the School concerning their choice of Upper Level courses before enrolling in Year 2.

Level I

MATH1011	General Mathematics 1B
MATH1031	Mathematics for Life Sciences
MATH1041	Statistics for Life and Social Sciences
MATH1131	Mathematics 1A
MATH1141	Higher Mathematics 1A
MATH1231	Mathematics 1B
MATH1241	Higher Mathematics 1B

Upper Level

Mathematics Level II

MATH2011	Several Variable Calculus
MATH2111	Higher Several Variable Calculus

Applied Mathematics Level II

MATH2120	Mathematical Methods for Differential Equations
MATH2130	Higher Mathematical Methods for Differential Equations
MATH2140	Operations Research: Methods and Applications
MATH2240	Introduction to Oceanography and Meteorology
MATH2260	Dynamical Systems
MATH2281	Biomathematics
MATH2301	Mathematical Computing

Pure Mathematics Level II

MATH2400	Finite Mathematics
MATH2501	Linear Algebra
MATH2510	Real Analysis
MATH2520	Complex Analysis
MATH2601	Higher Linear Algebra
MATH2620	Higher Complex Analysis

Statistics Level II

Note: The course MATH2841 Statistics SS is available for students who wish to take only 6 units of credit of Level II Statistics. It cannot be followed by any Level III statistics courses.

MATH2801	Theory of Statistics
MATH2810	Statistical Computing for Categorical Data
MATH2831	Linear Models
MATH2841	Statistics SS
MATH2871	Data Management for Statistical Analysis
MATH2901	Higher Theory of Statistics
MATH2910	Higher Statistical Computing for Categorical Data
MATH2931	Higher Linear Models

Mathematics Level III

MATH3041	Mathematical Modelling for Real World Systems

Applied Mathematics Level III

Before attempting any Level III Applied Mathematics course a student must have completed at least 12 units of credit of Level II Mathematics courses including the prerequisites specified for individual courses.

MATH3101	Computer Methods for Differential Equations
MATH3121	Mathematical Methods
MATH3161	Optimisation Methods
MATH3181	Optimal Control
MATH3201	Dynamical Systems and Chaos
MATH3241	Fluid Dynamics
MATH3261	Atmosphere-Ocean Dynamics
MATH3301	Advanced Mathematical Computing

Pure Mathematics Level III

Before attempting any Level III Pure Mathematics courses, except MATH3411 or MATH3421, students must normally have completed at least 12 units of credit of Level II Mathematics including the prerequisites specified for individual courses. For higher courses the average performance in these courses should be at distinction level. Subject to the approval of the Head of the Department, this may be relaxed. Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling.

The courses MATH3511, MATH3680 and MATH3740 are normally offered only in even numbered years and the courses MATH3531, MATH3780 and MATH3790 only in odd numbered years.

MATH3411	Information, Codes and Ciphers
MATH3421	Logic and Computability
MATH3511	Transformations, Groups and Geometry
MATH3521	Algebraic Techniques in Number Theory
MATH3531	Topology and Differential Geometry
MATH3541	Differential Equations
MATH3560	History of Mathematics
MATH3570	Foundations of Calculus
MATH3610	Higher Analysis 1: Real Analysis
MATH3620	Higher Analysis 2: Functional Analysis
MATH3630	Higher Analysis 3: Integration
MATH3641	Higher Differential Equations
MATH3680	Higher Complex Analysis
MATH3690	Higher Algebraic Topology
MATH3700	Higher Differential Geometry
MATH3710	Higher Algebra 1: Group Theory
MATH3720	Higher Algebra 2: Rings and Fields
MATH3740	Higher Number Theory
MATH3780	Higher Geometry
MATH3790	Higher Computational Combinatorics

Statistics Level III

Note: Not all Level III Statistics courses are offered every year. Contact the Department of Statistics for details.

MATH3801	Probability and Stochastic Processes
MATH3811	Statistical Inference
MATH3821	Statistical Modelling and Computing
MATH3830	Design and Analysis of Experiments
MATH3831	Statistical Methods in Social and Market Research
MATH3841	Statistical Analysis of Dependent Data
MATH3880	Advanced Probability
MATH3890	Special Topics in Statistics
MATH3901	Higher Probability and Stochastic Processes
MATH3911	Higher Statistical Inference
MATH3930	Higher Design and Analysis of Experiments
MATH3931	Higher Statistical Methods in Social and Market Research
MATH3941	Higher Statistical Analysis of Dependent Data
MATH3980	Higher Advanced Probability

Media, Film and Theatre

Coordinator: Professor Philip Bell

School Office: Room 311U, Robert Webster Building

Administrative Assistants: Jennifer Beale, Julie Miller

Tel: (02) 9385 4856 **Fax:** (02) 9385 6812

Email: mft@unsw.edu.au

Website: <http://media.arts.unsw.edu.au>

The School of Media, Film and Theatre teaches undergraduate and postgraduate programs in media production and its contexts, film aesthetics and history, the analysis and history of drama and theatrical performance, and dance education.

The School is housed in the Sir Robert Webster Building and employs sophisticated production, post-production digitally-equipped laboratories, excellent rehearsal spaces and theatres, as well as modern teaching spaces.

Bachelor of Arts**Major Sequences in Media, Culture and Technology, Film, and Theatre and Performance Studies**

Students may take a major sequence, which will consist of no fewer than 42 units of credit and normally involve two years of Upper Level study in 1. Media, Culture and Technology, or 2. Film, or 3. Theatre and Performance Studies.

Before proceeding to a major sequence at Upper Level, all students must take at least 6 or 12 units of credit in Level 1 core courses. Please see the major sequences below for the relevant core course:

Level 1

MEFT1100	An Introduction to Media: Television, Telephones and Everyday Life	S1
MEFT1200	Introduction to Film	S1
MEFT1201	Working with Image and Sound	S2
MEFT1300	Reading Performance	S2
MEFT1301	Introduction to Theatre and Performance Studies	S1

1. Major Sequence in Media, Culture and Technology

The major in Media, Culture and Technology provides students with a progressive understanding of the social, cultural and phenomenological impacts of media and communication technologies in the twentieth and twenty-first centuries. The major consists of no fewer than 42 units of credit.

After completion of the core course **MEFT1100** An Introduction to Media: Television, Telephones and Everyday Life at Level 1, the major must include the following:

At **Level 2**, at least 12 units of credit from:

MEFT2100	Global Media: Markets, Flows and Cultures	S2
MEFT2101	Media Uses: Practices of Cultural Consumption*	
MEFT2102	Media Technologies and Cultural Change	S2
MEFT2103	Reading Media*	
MEFT2201	Australian Cinema and Television	S1
MEFT2351	Live Entertainment and Popular Culture	S1

At **Level 3**, at least 12 units from:

MEFT3100	Media, Tastes and Values*	
MEFT3102	Electronic and Digital Aesthetics	S2
MEFT3103	Media Democracies*	
MEFT3104	Transnational Media in the Asia Pacific	S1

MEFT3105 Media Forms*

MEFT3353 Performance in a Mediatized Culture S1

* Courses not offered in 2006 but will be offered in future years as part of the major sequence.

2. Major Sequence in Film

The major in Film provides students with a sophisticated understanding of the history and contemporary significance of film as a medium and cinema as an institution. The study of film is set in a broader context of screen cultures and audio-visual industries – including television, video and emerging new media – both in Australia and globally. The major consists of no fewer than 42 units of credit.

After completion of the core course **MEFT1200** Introduction to Film at Level 1, the major must include the following:

At **Level 2**, at least 12 units of credit from:

MEFT2200	Contemporary Approaches to Cinema	S1
MEFT2201	Australian Cinema and Television	S1
MEFT2202	Movie World: National Cinema	S2
MEFT2203	The Hollywood System	S2

At **Level 3**, at least 12 units from:

MEFT3200	Video Exercise	S1
MEFT3201	Aspects of Film History	S1
MEFT3202	Explorations in Contemporary Film Theory	S1
MEFT3203	Film Genres and Styles	S2
MEFT3204	Special Program in Film Studies	S1 & S2
MEFT3205	Cinemas and Cultures	S2

3. Major Sequence in Theatre and Performance Studies

The major in Theatre and Performance Studies concentrates on the history, theory and practice of theatre and performance. It will consist of no fewer than 42 units of credit.

After completion of at least one of the core courses **MEFT1300** Reading Performance or **MEFT1301** Introduction to Theatre and Performance Studies at Level 1, the major must include the following:

MEFT2301	Critical Perspectives on Theatre and Performance Studies	S1

At **Level 2**, at least 6 units of credit from:

MEFT2300	Staging Australia	S2
MEFT2306	Theories of Acting and Performing	S2
MEFT2351	Live Entertainment and Popular Culture	S1

At **Level 3**, at least 12 units from:

MEFT3300	Aspects of Theatre and Performance History	S1
MEFT3301	Building a Repertoire for Contemporary Stage *	
MEFT3302	Production Exercise	S1
MEFT3303	Workshop Exercise	S2
MEFT3304	Writing for Performance*	
MEFT3351	Live Art and Physical Theatres	S2
MEFT3352	Studies in World Theatre	S2
MEFT3353	Performance in a Mediatized Culture	S1
MEFT3354	Performance Making	S1

* Courses not offered in 2006 but will be offered in future years as part of the major sequence.

Honours Level

For entry to Honours students must have completed 54 units of credit in a major sequence in Media, Culture and Technology, Film or Theatre and Performance Studies, with a grade average of at least 70%.

MEFT4000	Media, Film and Theatre Honours Full-time
MEFT4050	Media, Film and Theatre Honours Part-time

Bachelor of Arts (Media and Communications)

The Media and Communications core program gives students a sophisticated understanding of the history, scope and socio-cultural impact of new media technologies, and of the debates that have accompanied their development and use. Important features of this core program are its emphasis on new computer-based multimedia and its focus on Australian media industries in relation to globalisation. The degree is vocationally relevant in its orientation and all students are given significant practical experience in new computer-based multimedia communication technologies.

The program emphasises analytical skills combined with extensive production experience to equip students with a thorough knowledge of the rapidly changing fields of media and communications. This grounding enables them to interpret, create and apply the products of new media not only in the context of the mass information and entertainment industries but also in a variety of other public and private sectors such as education, on-the-job training and specialised information services.

In addition to the Media and Communications core program, students must complete two elective courses and a major in the humanities or social sciences, to permit them to study a related field in depth or to pursue their interests in other areas.

Core Courses

The core program is only available to students enrolled in the BA (Media and Communications) (program 3402), BSc (Media and Communications) (program 3994), and BA (Media) LLB (program 4764).

Level 1

MDCM1000	New Media Technologies A	S1
MDCM1001	New Media Technologies B	S2

Level 2

MDCM2000	Researching and Writing for New Media	S1
MDCM2002	Media Production	S1
MDCM2003	Multimedia Production	S2

Level 3

MDCM3000	Media Forms	S1
MDCM3002	Advanced Media Production	S1
MDCM3003	Multimedia Production in Industry Contexts	S2

Elective Courses

These courses are available to all Faculty of Arts and Social Sciences students at Upper Level.

MEFT2100	Global Media: Markets, Flows and Cultures	S2
MEFT2102	Media Technologies and Cultural Change	S2
MEFT2201	Australian Cinema and Television	S1
MEFT3102	Electronic and Digital Aesthetics	S2
MEFT3104	Transnational Media in the Asia Pacific	S1
MEFT3353	Performance in the Mediatized Culture	S1

Honours Level

For entry to Honours in Media and Communications, students must have normally completed 60 units of credit in MDCM courses with a grade average of at least 70%.

MDCM4000	Media and Communications Honours Full-time
MDCM4050	Media and Communications Honours Part-time

Bachelor of Arts (Dance) Bachelor of Education

The BA(Dance) BEd (program 3408) is a specialist double degree in Dance and Dance Education. Although a wide variety of dance careers is open to graduates, the primary focus of the double degree program is to equip graduates to serve as dance teachers in schools and in the community. The program offers extended study in four major areas (plus the General Education program). Dance Practice offers dance styles classes designed to improve and consolidate students' dance skills. Dance Theory is a sequence of mainly theoretical courses which provide an intellectual rationale for understanding the course. Dance Education and Education both give dance a pedagogic context as well as introduce students to educational theories. A major sequence in a second course area from within the Faculty provides students with their second teaching subject. The program carries 192 units of credit and consists of:

Level 1

DANC1001	Dance Styles 1	S1
DANC1002	Dance Styles 2	S2
DANC1101	Anatomical Foundations of Dance Education	S1
DANC1102	Teaching Safe Dance	S2
EDST1101	Educational Psychology 1	S1
EDST1103	Educational Psychology 2 or	S2
EDST1104	Social Perspectives in Education	S2

plus 12 units of credit in Level 1 courses from the approved major sequences

Upper Level

DANC2000	Dance Analysis and Composition 1	S1
DANC2002	Theatre Production	S2
DANC2005	Dance Analysis and Composition 2	S2
DANC2007	History of Dance	S1
DANC2103	Dance Styles 3	S1
DANC2104	Dance Styles 4	S2
DANC2105	Dance Styles 5	S1
DANC2106	Dance Styles 6	S2
DANC2107	Dance Styles 7	S1
DANC2201	The Teaching-Learning Process in Dance	S2
DANC2203	Dance Teaching Practice	S2
DANC2209	Dance Method A	S1

DANC2211	Dance Method B	S2
EDST4080	Special Education	S1
EDST4081	Professional Issues in Teaching	S1
EDST4095	Gifted and Talented Students: Recognition and Response	S1

plus 30 units of credit from Upper Level courses in the approved major sequences

plus 6 units of credit in the requisite Second Teaching Method course offered by the School of Education

and
12 units of credit in courses approved by the Faculty in the General Education program.

Outside Credits

In special circumstances students may be given permission to include towards a major sequence in the School up to a maximum of 6 units of credit in a related course or courses offered by another school/department. It is imperative, however, that they seek the written authorisation of the Head of School prior to making their enrolment.

Honours Level

Students seeking permission to undertake Dance Honours must have completed 192 units of credit as detailed above and achieved a minimum average grade of Credit in dance courses. Those intending to enroll in the Honours program must seek the permission of the Dance Program Coordinator so that an appropriate course of study can be planned.

DANC4000	Dance Honours Full-time
DANC4050	Dance Honours Part-time

Modern Language Studies

School Office: Reception Room 258, Morven Brown Building

Email: languages@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/>

The School of Modern Language Studies teaches majors in Chinese and Indonesian Studies, French, German Studies, Japanese and Korean Studies, Linguistics, Greek, Russian Studies and Spanish and Latin American Studies. Some courses are also available in Italian and Latin. The courses listed below are taught in English and are available to all students who meet the prerequisites. They are team-taught by staff members from different cultural backgrounds and will emphasise cross-cultural analysis.

Upper Level

MODL2000	Intercultural Communication	S1
MODL2002	Introduction to Professional Interpreting	S2

Music and Music Education

Coordinator: Dr Christine Logan

School Office: Room G19, Robert Webster Building

Tel: (02) 9385 4871

Email: music@unsw.edu.au

Website: <http://music.arts.unsw.edu.au/>

The School of Music and Music Education offers the following undergraduate degrees and courses of study:

1. A major sequence and an Honours program within the Bachelor of Arts (BA) or some other Bachelor programs
2. The Bachelor of Music degree (BMus)
3. The combined Bachelor of Music Bachelor of Education degree (BMus BEd)
4. The combined Bachelor of Music Bachelor of Arts degree (BMus BA)
5. Fundamentals of Music, which serves as an introductory course in musicianship and musical techniques
6. A Diploma in Music which may be undertaken concurrently with another program of study or by students who already hold a Bachelor Degree in another discipline other than music

1. The Bachelor of Arts (BA) with a major in music is a three year degree designed to develop musicianship and performing skills in association with an exploration of musicology: music history, style, musical perception and analysis, music technology, and the study of music in its cultural contexts (ethnomusicology). There are two possible major sequences. The first is:

Year 1

MUSC1101	Music Reinvented
MUSC1312	BA Musicianship A

Year 2

MUSC2311 BA Musicianship B
 MUSC2312 BA Musicianship C
 Option in Musicology

Year 3

MUSC2332 Electronic Music
 or
 Option in Musicology or Musicianship
 Plus Option in Musicology or Musicianship

Performance in one of the performance ensembles offered by the School is part of each of the BA Musicianship A, B, C courses. At least 6UOC at 3000 level must be completed in Year 3.

The second possible major sequence (for students with less formal training in music) is:

Year 1

MUSC1001 Music Fundamentals
 MUSC1312 BA Musicianship A

Year 2

MUSC2111 Introduction to Musicology
 MUSC2311 BA Musicianship B
 MUSC2312 BA Musicianship C

Year 3

Option Option in Musicology or Musicianship
 Option Option in Musicology or Musicianship

Performance in one of the performance ensembles offered by the School is part of each of the Music Fundamentals and BA Musicianship A, B, C courses. At least 6UOC at 3000 level must be completed in Year 3.

The Bachelor of Arts (BA) permits the combination of music with a wide range of other options in the Faculty of Arts and Social Sciences and in other faculties, including choices such as theatre, film and dance, languages, history, philosophy and psychology. Through double degrees such as the BA LLB or the BSc BA, it may be possible to combine serious music studies with law, science and other degree courses.

BA students who have completed HSC Music 1 or who have AMEB or equivalent grades below 7th grade performance and 5th grade musicianship are encouraged to complete MUSC1001 (Music Fundamentals). Completion of this course at a required level provides the means of proceeding to a BA with a major in Music, and may also provide, if combined with a satisfactory audition, a means for subsequent enrolment in the BMus, the BMus BEd, or the BMus BA.

Consistently good work in the BA with a major in Music and completion of additional courses in second and third years may lead to a fourth (Honours) year of study completing a BA (Hons).

2. The Bachelor of Music (BMus) is a three year specialist music degree which enables students to develop skills, knowledge and critical thinking in music as preparation for professional work in areas as diverse as music performance, private teaching, broadcasting, recording, arts administration, concert planning, music and arts journalism, arranging and composition. Students undertake studies in professional practices, musicology and ethnomusicology – including music history, style, musical perception and analysis, music in its cultural contexts – and musical technology, performance, jazz studies and composition. At the same time students have flexibility in their course to enable them to combine music studies with some work in a related discipline like theatre and film, or in languages, English literature and language, history, philosophy, amongst others.

Admission to the program is subject to a satisfactory audition/interview and an acceptable level of attainment in year 12 studies or equivalent.

Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

BMus students must take part in at least two of the performance ensembles offered by the School, one of which must be a major performing ensemble (refer to School handbook for details).

Consistently good work in the BMus may lead to a fourth (Honours) year of study, completing a BMus(Hons).

3. The Bachelor of Music Bachelor of Education (BMus BEd) is a four year professional double degree which offers graduates a wide range of opportunities in music teaching and other music related careers. The BMus BEd offers an integrated training in six major areas: Musicology, Musicianship, Music Education Studies, Performance Studies, Education Studies and Contextual Studies. As well as developing many skills in teaching classroom music from early primary to final secondary grades

(K-12), the BMus BEd provides a specialist sequence of courses designed to train conductors and teachers of instrumental and vocal ensembles. A special feature of the BMus BEd is the attention given to music history, aural training and musicianship courses as core units in the first three years of the program. In addition to the thorough grounding provided in Western art music, specialist courses dealing with music in its cultural contexts (ethnomusicology), musical technology and contemporary pop/jazz styles broaden and enrich the academic and professional capacities of all graduates. Graduates are qualified to teach classroom and instrumental/vocal music from kindergarten to year 12, and are accredited to teach in all Australian states. The student's training involves practice teaching sessions in Years 1, 2 and 3 and 4 in a variety of different schools.

Admission to the program is subject to a satisfactory audition/interview and acceptable level of attainment in Year 12 studies or equivalent.

Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

At the end of Year 4, students may be permitted to enter an Honours Year in either Music or Music Education. Students who satisfy the requirements for Honours as well as those for the award of the BMus BEd double degree will graduate with the award BMus BEd (Hons).

4. The Bachelor of Music Bachelor of Arts (BMus BA) is a four year double degree which combines the full professional training of the BMus with an extensive range of other options within the Faculty of Arts and Social Sciences. The music degree develops musicianship and musical skills in general through courses in musicology and ethnomusicology – including music history, style, musical perception and analysis, music in its cultural contexts – and musical technology, performance, jazz studies and composition. The Arts degree offers a wide range of options for specialist studies in two or three other areas within the Faculty. The whole range of professional work open to BMus graduates in performance, private teaching, broadcasting, recording, arts administration, concert planning, music and general arts journalism, arranging and composition will be open to the BMus BA graduates. In addition, the BA will qualify them for public and private sector administrative and policy positions.

Admission to the program is subject to satisfactory audition/interview and an acceptable level of attainment in year 12 studies or equivalent.

Assumed knowledge: HSC Music 2 or Extension or equivalent qualification.

5. Music Fundamentals serves as an introductory course in musicianship and musical techniques. It is open to all undergraduates and does not have a musical prerequisite.

6. The Diploma in Music (program 3418) may be taken either concurrently with a non-music Bachelor program (with approval from a student's program authority) or as a three year, part-time program for students who already hold a Bachelor degree (with approval from the Faculty of Arts and Social Sciences). The structure of the Diploma follows that of the Bachelor of Arts major in music (item 1 above).

University Performance Ensembles – Music studies in the Faculty concentrate on the texts and contexts of music, and involve the active development of the student's musicianship and practical abilities. Performance groups run by the School include: The Collegium Musicum Choir, the UNSW Orchestra, the Pipers Wind Band (Concert Band), a vocal chamber group the Burgundian Consort, chamber music ensembles, Traditional Music Group, Handbell Ensemble, Jazz Groups.

The Collegium Musicum Choir of UNSW is open to all students and staff of the University interested in choral singing. The choir rehearses each Wednesday evening from 4.30–7.30 pm and gives several public concerts each year, often with the Collegium Musicum Orchestra who are based on the Australia Ensemble and resident at UNSW. For audition and further details, please contact the School of Music and Music Education.

The University of New South Wales Orchestra and Concert Band are open to UNSW students and staff with the necessary instrumental performance standards. The orchestra rehearses each Tuesday evening from 6.30–8.30 pm and the Concert Band rehearses each Tuesday from 4:00–6:00 pm during session. Both give several public performances each year. For further details, please contact the School Office.

Core Courses

MUSC1001	Music Fundamentals
MUSC1101	Music Reinvented
MUSC1302	Musicianship 1A
MUSC1312	BA Musicianship A
MUSC1401	Professional Practices A
MUSC1402	Professional Practices B
MUSC1501	Music Performance 1A
MUSC1502	Music Performance 1B

MUSC1601	Introduction to Music Education
MUSC2111	Introduction to Musicology
MUSC2301	Musicianship B
MUSC2302	Musicianship C
MUSC2311	BA Musicianship B
MUSC2312	BA Musicianship C
MUSC2401	Professional and Ethical Practices C
MUSC2402	Professional Practices D
MUSC2501	Music Performance 2A
MUSC2502	Music Performance 2B
MUSC2601	Introduction to Secondary Music Education
MUSC3101	Professional and Ethical Practices in Music
MUSC3401	Advanced Professional Practices A
MUSC3402	Advanced Professional Practices B
MUSC3501	Advanced Music Performance 3A
MUSC3502	Advanced Music Performance 3B
MUSC3601	Specialist Studies in Music Education
MUSC3602	Creativity and Special Topics in Music Education
MUSC3612	Principles & Processes of Music Education
MUSC4601	Advanced Studies in Music Education
MUSC4602	Music Teaching Experience

Musicology Options

MUSC2101	Music of the Baroque
MUSC2111	Introduction to Musicology
MUSC2112	Music of the 18th and 19th Centuries
MUSC2132	Music of the late Middle Ages and Renaissance
MUSC2201	Music of Aboriginal Australians
MUSC3101	Professional and Ethical Practices in Music
MUSC3112	Seminar in Musicology
MUSC3131	Jazz and Popular Music Studies
MUSC3162	Twentieth Century Music
MUSC3212	Music of India

Musicianship Options

MUSC2332	Electronic Music
MUSC3301	Music Analysis
MUSC3302	Orchestration and Arrangement
MUSC3331	Advanced Electronic Music
MUSC4650	Conducting

Honours Level

MUSC4000	Bachelor of Music Honours
MUSC4001	Music Honours (BA)
MUSC4002	Music Education Honours

Organisation and Management

Head of School: A/Prof Lucy Taksa

School Office: Room 4096, Rupert Myers Building

Email: l.taksa@unsw.edu.au

Tel: (02) 9385 7152

Website: www.orgmanagement.unsw.edu.au/

The School of Organisation and Management was formed on 1 July 2004 by the merger of the School of Industrial Relations and Organisational Behaviour and the School of International Business. Consequently course codes previously starting with IROB and IBUS are now listed in this handbook under MGMT. The School is located in the Faculty of Commerce and Economics and offers three distinct disciplinary streams: Human Resource Management; Industrial Relations; and International Business to students within the Faculty of Arts and Social Sciences. Students within the Faculty of Arts and Social Sciences may undertake a major in Human Resource Management, Industrial Relations or International Business. It is not possible to major in more than one of these streams.

The specialisation in **human resource management** provides a strong practical and theoretical grounding in the policies and processes involved in the management of people at work. In a climate of rapid economic change, effective labour management is being seen as a critical component of the operation and strategic planning of both private firms and public sector organisations.

International Business is a rapidly growing field of study dealing with the development, strategy, and management of multinational enterprises. Business is becoming increasingly international and the most effective leaders and professionals of the future will be those who know how to deal with the problems of doing business and managing organisations in a complex and uncertain global business environment.

Doing business and making decisions internationally involves greater complexity and is much more challenging compared to decision making

restricted to the domestic context. Specialist knowledge and skills are required to be successful in international business. For example, strategic decisions have to be made about which countries to operate in and whether or not to export or license, whether to set up a new facility, establish a joint venture or acquire an existing business, and how to sustain competitiveness internationally. Cultural differences also have to be understood to conduct effective business negotiations and to manage people in a cross-border context.

The School's program of study in **Industrial Relations** focuses on the institutions, practices and processes associated with contemporary employment relations. It is designed on a multidisciplinary social science basis to foster an appreciation of the many important questions relating to the role of individuals, trade unions, employers and government bodies in the world of work.

Major Sequence in Industrial Relations

A total of 42 units of credit obtained in the following Required and Option courses:

Required Courses (Minimum 18 units of credit)

MGMT1701	Industrial Relations
MGMT1702	Labour Organisation
MGMT2702	Industrial Law

Option List A (Minimum 12 units of credit)

MGMT2704	Social Organisation of Work
MGMT2715	Labour History*
MGMT3705	Management and Employment Relations
MGMT3706	Industrial Relations Policies and Processes*

Option List B (Minimum 6 units of credit)

MGMT2703	International Employment Relations*
MGMT2718	Human Resource Management
MGMT2724	Health and Safety at Work
MGMT3702	International Human Resource Management Practice
MGMT3708	Research Methods in Employment and Management
MGMT3721	Negotiation Skills
MGMT3724	Strategic Human Resource Management
MGMT3728	Managing Pay and Performance
MGMT3729	Managing Workplace Training

* This course is not offered every year, see the timetable for offerings in 2006.

Honours Entry

To progress to Year 4 Honours in Industrial Relations a student must:

1. Complete the specified number of Required and Options courses, plus MGMT3708**
2. Pass all these courses and obtain average grades of 71% or better in these courses
3. Obtain the permission of the Honours Coordinator to undertake the Honours year

** MGMT3708 is a prerequisite for Honours & should normally be taken as an Option in the session preceding the Honours year.

Honours Level

Students need to complete the following:

1. A thesis of 20,000 words
2. Honours Seminar (both sessions)
3. Two approved MGMT courses, one per session. (Details of approved courses may be obtained from the Head of School.)

Students undertaking Honours in Industrial Relations should enrol in one of the following course numbers in each session:

MGMT4736	Industrial Relations 4 Honours Full-Time
MGMT4737	Industrial Relations 4 Honours Part-Time

Major Sequence in Human Resource Management

A total of 42 units of credit obtained in the following Required and Option courses:

Required Courses (18 units of credit)

MGMT1701	Industrial Relations
MGMT1712	Management of Organisations
MGMT2718	Human Resource Management

Option List A (minimum 12 units of credit)

MGMT3702	International Human Resource Management Practice
MGMT3724	Strategic Human Resource Management
MGMT3728	Managing Pay and Performance
MGMT3729	Managing Workplace Training

Option List B (minimum 6 units of credit)

MGMT2702	Industrial Law*
MGMT2703	International Employment Relations*
MGMT2704	Social Organisation of Work
MGMT2715	Labour History*
MGMT2724	Health and Safety at Work
MGMT3705	Management and Employment Relations
MGMT3706	Industrial Relations Policies and Processes *
MGMT3708	Research Methods in Employment and Management*
MGMT3721	Negotiation Skills

* This course is not offered every year, see the timetable for offerings in 2006.

Honours Entry

To progress to Year 4 Honours in Human Resource Management a student must:

1. Complete the specified number of Required and Options courses, plus MGMT3708**
2. Pass all these courses and obtain average grades of 71% or better in these courses
3. Obtain the permission of the Honours Coordinator to undertake the Honours year

** MGMT3708 is a prerequisite for Honours and should normally be taken as an Option in the session preceding the Honours year.

Honours Level

1. A thesis of 20,000 words
2. Honours Seminar (both sessions)
3. Two approved MGMT courses, one per session. (Details of approved courses may be obtained from the Head of School.)

Students undertaking Honours in Human Resource Management should enrol in one of the following course numbers in each session:

MGMT4740	Human Resource Management 4 Honours Full-Time
MGMT4741	Human Resource Management 4 Honours Part-Time

Major Sequence in International Business

A total of 42 units of credit obtained in the following required and option courses.

Required Courses**Level 1 (12 units of credit)**

MGMT1101	Global Business Environment
MGMT1102	Managing Across Cultures

Upper Level (18 units of credit)

MGMT2101	International Business and Multinational Operations
MGMT3101	International Business Strategy
MGMT3102	Asia-Pacific Business

Options (12 units of credit)

MGMT2105	Chinese Business Enterprise
MGMT2106	Comparative Management Systems in East Asia
MGMT2110	Alliance Management and International Co-operation*
MGMT3103	Global Stakeholder Management

* This course is not offered every year, see the timetable for offerings in 2006.

Other courses in Arts and Social Sciences may be substituted for the above options with the approval of the Head, School of Organisation and Management.

Honours Entry

To progress to Year 4 Honours in International Business a student must:

1. Complete 48 units of credit in International Business satisfying the requirements of a major sequence**
2. Pass all these courses and obtain average grades of 71% or better in these courses
3. Obtain the permission of the Honours Coordinator to undertake the Honours year

**Students are highly encouraged to take MGMT3708 as a Free Option in the session preceding the Honours year.

Honours Level

1. A thesis of 20,000 words
2. Honours Seminar (both sessions)
3. Two approved MGMT courses, one per session. (Details of approved courses may be obtained from the Head of School.)

Students undertaking Honours in International Business should enrol in one of the following course numbers in each session:

MGMT4000	International Business Honours Full-Time
MGMT4050	International Business Honours Part-Time
MGMT4200	Combined International Business Honours Full-Time
MGMT4250	Combined International Business Honours Part-Time

Philosophy

Head of School: A/Prof Stephen Cohen

School Office: Room G54, Morven Brown Building

Tel: (02) 9385 2371

Email: philosophy@unsw.edu.au

Website: <http://philosophy.arts.unsw.edu.au>

Studying Philosophy provides intellectual skills that can help you to think critically, to better organise your thoughts and to present them logically and persuasively. Philosophy also addresses fundamental questions about the nature of reality, language, meaning, human knowledge and values. It provides a useful complement to studies in many disciplines but especially those in which logical thinking and clear expression are important. The range of Upper Level courses makes it possible for students majoring in other disciplines to select courses complementing their interests.

Level 1

There are four Level 1 courses. Students can gain Upper Level status by completing one, but it is suggested that two be completed if you wish to complete a major sequence in Philosophy.

Upper Level

Students must be in at least Year 2 of study in the Faculty in order to take Upper Level courses in Philosophy. Each course is designed to be self-contained, but particular groupings of courses will enable students to pursue sustained treatments of particular areas or historical developments in the treatment of issues. The School recommends that students intending to continue upper level courses enrol in one or more PHIL2000 gateway courses. In certain circumstances the prerequisites specified for courses may be waived. Students who feel they have a case for a concession of this kind should consult the School.

Major Sequence

A major sequence in Philosophy is a sequence of courses offered by the School carrying a total of at least 42 units of credit including no more than 12 units of credit in Level 1 courses and at least 18 units of credit in PHIL2100 courses or above. Subject to the approval of the School, a student may be permitted to count up to 6 units of credit offered outside the School toward a major sequence in Philosophy. Some Philosophy courses may be counted towards a major sequence in the School of History and Philosophy of Science and in the School of Education.

Honours Entry

For entry to Philosophy Honours (Research), students must normally have completed 54 units of credit in Philosophy, consisting of 6 or 12 units of credit at Level 1 and the remainder at Upper Level. Upper Level courses must include at least 24 units of credit in PHIL2100 courses or above, including PHIL3910 Advanced Philosophy Seminar. Students must also normally have a grade average of at least 70 per cent in their Philosophy courses, including at least one Distinction result.

For Combined Honours (Research), the requirement is normally 48 units of credit in Philosophy, consisting of 6 or 12 units of credit at Level 1 and the remainder at Upper Level. Upper Level courses must include no more than 12 units of credit at the PHIL2000 level, at least 24 units of credit in PHIL2100 courses or above, including PHIL3910 Advanced Philosophy Seminar. Students must also normally have a grade average of at least 70 per cent in their Philosophy courses, including at least one Distinction result. The School recognises that the particular overall programs of some students enrolling in Combined Honours (Research) might be such as to make it desirable to vary the Philosophy course requirements for admission. Students are invited to consult the School about this matter with regard to their particular situations.

Subject to approval of the School, which considers the individual courses nominated by a student and the student's overall program in Philosophy, a student may be permitted to count up to 6 units of credit offered outside the School toward satisfying the Honours entry requirements.

Level 1

PHIL1007	Knowledge and Reality	S2
PHIL1008	Ethics and Society	S1
PHIL1010	Thinking about Reasoning	S2
PHIL1014	Introduction to European Philosophy	S1

Upper Level

PHIL2001	Logic	S1
PHIL2002	Ways of Reasoning	S2

PHIL2005	20th Century European Philosophy	S2
PHIL2008	Issues in Applied Ethics	S1
PHIL2020	Philosophy of Language	S2
PHIL2109	Contemporary Metaphysics	S1
PHIL2206	Philosophy of Mind	S1
PHIL2207	Philosophy of Psychology	S2
PHIL2208	Contemporary Epistemology	S1
PHIL2218	Foundations of Artificial Intelligence	S1
PHIL2309	Introduction to Hegel	S1
PHIL2310	Heidegger	S2
PHIL2316	Philosophy of Religion	S1
PHIL2416	Nietzsche and Philosophy	S2
PHIL2420	Environmental Ethics	S1
PHIL2421	Philosophy, Education and Society	S1
PHIL2424	Human Nature and Technology	S1
PHIL2510	Political Philosophy: Equality, Freedom and Justice	S1
PHIL2517	Representation and Sexual Difference	S1
PHIL2519	Introduction to Chinese Philosophy	S2
PHIL2520	Aspects of Chinese Thought	S2
PHIL2708	Reading Option	S1 & S2
PHIL2709	Ethics and Accountability	S2
PHIL3910	Advanced Philosophy Seminar	S2

Honours Level

PHIL4000	Philosophy Honours (Research) Full-Time
PHIL4050	Philosophy Honours (Research) Part-Time
PHIL4500	Combined Philosophy Honours (Research) Full-Time
PHIL4550	Combined Philosophy Honours (Research) Part-Time

Philosophy of Science

Coordinator: Anthony Corones, School of History & Philosophy of Science

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Tel: (02) 9385 2357

Email: a.corones@unsw.edu.au

The Philosophy of Science program is jointly taught by the School of Philosophy and the School of History and Philosophy of Science. It is designed to provide a coherent sequence of courses both for students who wish to prepare themselves for undertaking advanced study within the areas of logic, methodology and philosophy of science, and those who merely wish to deepen their comprehension of the course matter of a major in another field. While a second major may be taken in any discipline available, the program is designed in such a way that students can pursue a second major in either Philosophy or History and Philosophy of Science.

A major sequence is made up of not less than 36 units of credit. Students should note, however, that they may not 'double-count' courses towards a second major and they must satisfy general Faculty regulations. Students may also need to meet certain prerequisite requirements within the program. The program given below may be varied by the Coordinator.

Level 1

6 units of credit obtained from one of the following courses:

HPSC1100	Cosmos and Culture
HPSC1200	Science, Good, Bad and Bogus
PHIL1007	Knowledge and Reality
PHIL1008	Ethics and Society
PHIL1010	Thinking about Reasoning
PHIL1011	Minds, Bodies and Persons#

Upper Level

18 units of credit obtained in the following courses:

HPSC2200	Philosophy of Science
PHIL2001	Logic
and either	
HPSC3200	Topics in the Philosophy of Science
or	
PHIL2107	Advanced Philosophy of Science#*
or	
PHIL2117	Philosophical Logic#*

12 units of credit obtained in the following:

HPSC2100	The Scientific Revolution#
HPSC2600	Galileo, Science and Religion
HPSC2610	Computers, Brains and Minds
HPSC3200	Topics in the Philosophy of Science
PHIL2107	Advanced Philosophy of Science#*
PHIL2116	Scientific Method#

PHIL2117	Philosophical Logic#*
PHIL2118	Philosophy and Biology#
PHIL2206	Philosophy of Mind
PHIL2207	Philosophy of Psychology
PHIL2208	Contemporary Epistemology
PHIL2218	Philosophical Foundations of Artificial Intelligence

*Students may not count the same course toward satisfaction of both the 12 units of credit requirement and the 18 units of credit requirement from the above list.

Not offered in 2006.

Physics

Coordinator: A/Prof G Morriss

Tel: (02) 9385 4553

Email: info@phys.unsw.edu.au

Website: www.phys.unsw.edu.au

The School of Physics is in the Faculty of Science. The 1st Year Office is in Room LG03, Old Main Building. Enquiries about Upper Level courses are dealt with by the Physics Friend, School Office, Room 62, Old Main Building.

Level 1

PHYS1111	Fundamentals of Physics
PHYS1121	Physics 1A
PHYS1221	Physics 1B

Upper Level

PHYS2010	Mechanics
PHYS2020	Computational Physics
PHYS2030	Laboratory A
PHYS2040	Quantum Physics
PHYS2050	Electromagnetism
PHYS2060	Thermal Physics
PHYS2160	Astronomy
PHYS2170	The Search for Life Elsewhere in the Universe
PHYS2410	Biophysics 1
PHYS2630	Electronics
PHYS2801	Atmospheric Science
PHYS2810	Atmospheric Physics
PHYS3020	Statistical Physics
PHYS3040	Experimental Physics A1
PHYS3050	Nuclear Physics
PHYS3060	Advanced Optics
PHYS3070	Experimental Physics A2
PHYS3080	Solid State Physics
PHYS3160	Astrophysics
PHYS3210	Quantum Mechanics
PHYS3230	Electromagnetism
PHYS3630	Electronics
PHYS3710	Lasers and Applications
PHYS3720	Optoelectronics
PHYS3770	Laser and Spectroscopy Laboratory
PHYS3780	Photonics Laboratory

Note: Physics is not available as a major sequence within the Faculty of Arts and Social Sciences.

Political Economy

Coordinator: Dr George Argyrous, School of Social Science and Policy

Office: G23, Morven Brown Building

Email: g.argyrous@unsw.edu.au

Website: <http://www.arts.unsw.edu.au/futurestudents/undergraduate/politicaconomy.html>

The major in Political Economy consists of seven courses, each of 6 units of credit, for a total of 42 units of credit with at least 12 units of credit from the 3000 level.

First year

PECO1000	Introduction to Political Economy	S1
PECO1001	Australia in the Global Economy	S2

Upper Level

PECO2000/		
SLSP2000	Political Economy and the State*	S1
PECO3000	Political Economy	S2

Bachelor of Arts

BA students majoring in Political Economy must complete the core courses **PECO1000**, **PECO1001**, **PECO2000** and **PECO3000**. They must also

complete any three courses from the list of electives below including at least one 3000 level course.

Bachelor of Social Science

Students majoring in Political Economy as part of the Bachelor of Social Science must complete the core courses **PECO1000**, **PECO1001** and **PECO3000**. Students must also select four courses from the list of electives below including at least one 3000 level course.

** Please note that students who complete SLSP2000 cannot enrol in PECO2000, and vice versa.*

Electives

ARTS2000	Arts and Social Sciences Internship
COMD2000	The Theory and Practice of Development (SLSP2701)
COMD2050	Sustainable Development, Globalisation and the Third World (HPSC2550)
ECON3109	Economic Growth, Technology and Structural Change
ECON3110	Development Economics
ECON3120	Economic Reasoning
EURO2600	European Integration
HIST2047	Winners and Losers: Poverty, Welfare, Justice in Australia
POLS2023	Globalisation and Uneven Development
POLS2040	Politics and Business
POLS2049	Asia and the International Political Economy
POLS3047	Theories of the Market and its Critics
POLS3054	Theorising International Political Economy
SOCA2103	Globalisation and Fragmentation
SOCA2104	Technology, Work, Culture
SOCA3604	Gender, Work and Employment

Honours

Students who have completed 48 units of credit in Political Economy, including all compulsory courses, at a good credit average, may be admitted to a Combined Honours program. They must also have met the requirements for a single Honours program in one of the Schools or Departments teaching in the Bachelor of Arts program. For Combined Honours, students are required to present a thesis as approved by the Heads of the participating Schools or Departments.

PECO4500	Combined Political Economy Honours (Research) Full-time
PECO4550	Combined Political Economy Honours (Research) Part-time

Politics and International Relations

Coordinator: Professor Gavin Kitching

Administration: Pat Hall-Ingrey & Samantha Prats

Tel: (02) 93853786

Email: p.hall-ingrey@unsw.edu.au & s.prats@unsw.edu.au

School Email: politics_ir@unsw.edu.au

Tel: (02) 93852381 **Office Fax:** (02) 93851555

Website: <http://politics-ir.arts.unsw.edu.au/>

The School of Politics and International Relations is concerned with the study of political action, ideas, institutions and actors, from the local to the global. It deals with governments and how policies are made on a wide range of issues, such as the economy, the environment, and social issues. It explores ideas and the important thinkers who have helped shape political beliefs. It analyses different political systems, cultures and societies. It also covers the study of International Relations, in theory and practice, the global economy, international law, regionalism and institutions such as the United Nations. Our objective is to describe, analyse and understand the politics of our own country, of other countries and of the global community, as well as evaluate ideas about politics.

Major Sequence

Any student who wishes to gain a major sequence in Politics and International Relations must obtain 6 Level 1 and 36 Upper Level (or 12 Level 1 and 30 Upper Level) units of credit including 12 units of credit in POLS3### courses in Politics and International Relations.

Level 1

Normally students take only one Level 1 course in each session. Students cannot count more than 12 units of credit from Level 1 Politics and International Relations courses towards their degree.

POLS1002	Power and Democracy in Australia	S1
POLS1003	Australian Political Practice	S2
POLS1005	Politics and Crisis: An Introduction to Western Political Theory	S2

POLS1013	Thinking about Politics	S1
POLS1017	International Relations in the 20th Century	S1
POLS1020	International Relations: Continuity and Change	S2

Upper Level

Courses commencing with the numbers POLS2### have as their minimum prerequisite 36 units of credit; those commencing with the numbers POLS390# are advanced Upper Level lecture courses and require 36 units of credit including 6 units of Politics and International Relations at Credit level; while those commencing with the numbers POLS30## and POLS391# are Upper Level seminar courses and require at least a 65% average in 18 units of Politics and International Relations.

Upper Level Lecture Courses

POLS2003	The Political Development of Contemporary China	S2
POLS2008	Power and Policy in Australian Politics	S2
POLS2020	Sex, Human Rights and Justice	S2
POLS2023	Globalisation and Uneven Development	S2
POLS2024	Theories and Concepts of International Relations	S1
POLS2036	Political Development in Northeast Asia	S1
POLS2037	International Law: Power, Politics and Ideology	S1
POLS2040	Politics and Business	S1
POLS2041	Sexuality and Power: The Social Relations of Sex and the Sexes	S1
POLS2043	Free Speech	S1
POLS2046	Political Rhetoric	S2
POLS2048	International Security	S2

Pre-Honours Seminar Courses

POLS3943	US Hegemony and International Law	S2
POLS3948	Language, Satire and Politics	S1
POLS3952	Sovereignty, Order and the State	S2

Upper Level Internship Seminar Course

POLS3045	Politics and Policy: Theory and Practice	S1

Upper Level Seminar Courses

POLS3024	Australian Foreign Policy	S2
POLS3040	Early Political Texts	S2
POLS3054	Theorising International Political Economy	S1

Honours Level

Coordinator: Dr Katherine Gelber

Email: k.gelber@unsw.edu.au

POLS4000	Politics and International Relations Honours (Research) Full-Time

For entry to the Politics and International Relations Honours Program (Research) students must normally have completed 54 units of credit (9 courses) at 70% or higher average, including at least 6 Level 1 units of credit and 12 units of credit at 70% or higher from Pre-Honours POLS39## (or equivalent) courses. Courses equivalent to Pre-Honours POLS39## courses are all those POLS3### courses which had a credit entry requirement and were successfully completed prior to the end of 2005. With the permission of the Head of School, a student may include up to 12 units of credit from related courses in other schools.

Combined Honours

The Combined Honours Program allows a student to undertake an Honours year in both Politics and International Relations and another discipline. The normal School of Politics and International Relations entry requirement for a student seeking admission to a Combined Honours Program is 48 units of credit (8 courses) at 70% or higher average in Politics and International Relations, including at least 6 Level 1 units of credit and 12 units of credit at 70% or higher from Pre-Honours POLS39## (or equivalent) courses. Courses equivalent to Pre-Honours POLS39## courses are all those POLS3### courses which had a credit entry requirement and were successfully completed prior to the end of 2005. With the permission of the Head of School, a student may include up to 12 units of credit from related courses in other schools.

Psychology

The School of Psychology is in the Faculty of Science.

Coordinator: Professor Peter Lovibond

School Office: Room 1011, Mathews Building

Tel: (02) 9385 3041

Email: Enquiries@psy.unsw.edu.au

Website: www.psy.unsw.edu.au

Psychology is the scientific study of human behaviour. It is a diverse discipline that includes study of the processes of perceiving, learning and memory; the assessment of abilities and attitudes; the origins of personality and emotional states; the nature and effects of social interactions with other people; brain-behaviour relationships; and the causes of abnormal behaviour. Study in the scientific discipline of psychology provides the background necessary for further training in the application of psychology in a variety of professional contexts (see below for details about the requirements for registration as a professional psychologist).

Psychologists work in clinical, correctional, counselling, legal, educational and organisational settings. People with training in psychology also pursue careers in diverse areas including academic and health research; rehabilitation; occupational health and safety; advertising and marketing; and personnel selection, training and management.

Students enrolled in the Bachelor of Arts or the Bachelor of Social Science degrees can study psychology for one or two years in order to learn about themselves and other people, develop analytic skills and enhance their employability. Psychology can also be taken as a major sequence within these degrees and is an ideal complement to majors in other domains when an understanding of the nature and causes of human behaviour is relevant to your chosen profession.

Students should be aware that a Psychology major sequence in the Bachelor of Arts or Bachelor of Social Science degrees does not satisfy the requirements for an "accredited three-year sequence in Psychology" as described below. To satisfy these requirements, students must complete three courses in addition to the major sequence.

It is not possible to satisfy the requirements for entry to Honours in Psychology within the Bachelor of Arts or Bachelor of Social Science degrees, but students with this goal can apply to transfer to the Bachelor of Psychology at the end of Stage 2. Students with this aim should consult with the School of Psychology for advice about program selection.

What is required to become a professional psychologist?

To become a member of the professional body, the Australian Psychological Society, and for registration as a psychologist in NSW, students first need a university Bachelor degree which includes an accredited three-year sequence in psychology as approved by the Australian Psychological Society, plus an approved fourth year. Students must also follow this by completing an accredited 5th and 6th year academic program such as one of the Master of Psychology degrees (Clinical, Forensic or Organisational) or a combined Doctor of Philosophy/Master of Psychology degree as offered by this University. An alternative of two years of supervised experience in professional practice may be undertaken for registration as a psychologist in NSW.

English Proficiency

A high proficiency in English is necessary to pass Psychology courses.

Major Sequence

A major in Psychology is obtained by the completion of 42 units of credit (7 courses) which consist of PSYC1001 and PSYC1011, PSYC2001, and four other Psychology Upper Level II or Level III courses (either one Level II and three Level III, or two Level II and two Level III).

An accredited three-year sequence in Psychology is obtained by the completion of 60 units of credit (10 courses) which consist of PSYC1001 and PSYC1011, PSYC2001 and three other Psychology Upper Level II courses, and PSYC3001 and three other Psychology Upper Level III courses including one course from at least two of the following three elective groups: Advanced Perceptual/Cognitive – PSYC3151, PSYC3211, PSYC3221, PSYC3311, PSYC3321; Advanced Biological – PSYC3051, PSYC3241, PSYC3251, PSYC3261; Advanced Social – PSYC3121, PSYC3271, PSYC3281.

Level I

PSYC1001	Psychology 1A	S1
PSYC1011	Psychology 1B	S2

Upper Level II

PSYC2001	Research Methods 2	S1
PSYC2061	Social and Developmental Psychology	S1
PSYC2071	Perception and Cognition	S2
PSYC2081	Learning and Physiological Psychology	S1
PSYC2101	Assessment and Personality	S2

Upper Level III

PSYC3001	Research Methods 3A	S1
PSYC3011	Research Methods 3B	S2
PSYC3051	Physiological Psychology	S2
PSYC3121	Social Psychology	S2

PSYC3141	Behaviour in Organisations	S1
PSYC3201	Psychopathology	S2
PSYC3211	Cognitive Science	S2
PSYC3221	Vision and Brain	S1
PSYC3241	Psychobiology of Memory and Motivation	S1
PSYC3271	Personality and Individual Differences	S1
PSYC3301	Psychology and Law	S1
PSYC3311	The Psychology of Language	S1
PSYC3331	Health Psychology	S2
PSYC3341	Development Psychology	S2

Russian Studies

Coordinator: Dr Ludmila Stern

Tel: (02) 9385 3649

Email: russian@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/russian/russian.html>

Russian Studies is available as a major in Arts and also to students of all faculties as a co-major, minor, elective/option, General Education unit or as a major in the Diploma in Languages. Russian Studies offers a range of courses designed to develop an informed understanding of Russia and the former Soviet Union through the study of Russian language, literature, civilisation and history. Russian language courses cater both for complete beginners and also for advanced or native speakers. Although language study is required for a major sequence in Russian Studies, several of the Upper Level courses require no knowledge of the Russian language and can be taken by students from other schools interested in learning about Russian literature, society and history.

Note: Students with any proficiency in Russian must consult the staff in Russian Studies prior to enrolment, unless they have taken Russian in the previous session at UNSW. Please see: <http://languages.arts.unsw.edu.au/main/placetest.html>

Major Sequence

Major sequences require 42 units of credit in Russian Studies. It requires (1) 12 units or more from the language core; (2) the completion of RUSS2112 or higher (3) the completion of 18 units or more from upper level electives. Students are advised to consult with the Russian Studies staff to plan their program.

Honours Level

Entry into the Honours program requires 54 units of credit in an approved sequence with an average of at least 70% or better in Russian courses or 48 units of credit in an approved sequence with an average of at least 70% or better for entry to the Combined Honours program.

Language Core

RUSS1111	Introductory Russian 1	S1
RUSS1112	Introductory Russian 2	S2
RUSS2111	Intermediate Russian 1	S1
RUSS2112	Intermediate Russian 2	S2
RUSS3111	Advanced Russian 1	S1
RUSS3112	Advanced Russian 2	S2

Upper Level

RUSS2100	Nineteenth Century Russian Classics*	
RUSS2101	20 th -Century Russian Literature and Society	S2
RUSS2102	The Great Terror	S1
RUSS2103	The Russian Revolution*	
RUSS2200	Soviet Cinema	S1
EURO2500	The Russian Experience*	
MODL2002	Introduction to Professional Interpreting	S2

* Not offered in 2006.

Honours Level

RUSS4000	Russian Honours (Research) Full-Time	
RUSS4050	Russian Honours (Research) Part-Time	
RUSS4500	Combined Russian Honours (Research) Full-Time	
RUSS4550	Combined Russian Honours (Research) Part-Time	

Social Science and Policy

Coordinator: Dr Rogelia Pe-Pua, School of Social Science and Policy

School Office: Room G30, Morven Brown Building

Tel: (02) 9385 2292

Email: slsp@unsw.edu.au

Website: <http://slsp.arts.unsw.edu.au>

The School of Social Science and Policy offers programs in social science and policy studies. These include the core program in the Bachelor of

Social Science degree, Bachelor of Social Science in Criminology and a major sequence in Policy Studies in the Bachelor of Arts degree.

The programs offered are interdisciplinary, drawing from all the social sciences to achieve an integrated social scientific approach to many of the key issues and problems facing societies today. They encourage and cultivate creativity and a critical perspective and develop skills in conducting research and in the application of social science to the policy process.

Special emphasis is placed on familiarising students with the ways in which social science is put into practice by using case studies drawn from current projects being undertaken or commissioned by governments, non-government and private sector organisations. The School aims to equip graduates with the skills and knowledge necessary to plan and conduct social research projects and to hold responsible positions in policy analysis and social research in either the public or private sectors.

The Bachelor of Social Science combines a core program of study in social science, policy analysis and research methods with a major study in a particular social science discipline.

The core program aims to provide students with skills in undertaking social research particularly in an applied policy setting. These include written communication skills with particular emphasis on reports, submissions, position papers and proposals; the ability to undertake research and data analysis, both quantitative and qualitative; analysis and critical evaluation of research, arguments and policies; and the use of computers in social research and information processing.

The major study aims to equip students with a knowledge base in one of the social sciences.

The Core Program in the Bachelor of Social Science

The core program is a 48 unit of credit sequence consisting of eight courses taken over three years.

SLSP1000	Social Science and Policy
or	
SLSP1002	Introduction to Policy Analysis
and	
SLSP1001	Research and Information Management
SLSP2000	Political Economy and the State
SLSP2001	Applied Social Research 1
SLSP2002	Policy Analysis Case Studies
SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science and Policy Project

Major Sequence in Policy Studies in the Bachelor of Arts

This sequence is designed for students enrolled in the Bachelor of Arts degree who wish to major in Policy Studies without completing the full Social Science and Policy core program including all the research methods courses. It would be suitable for students seeking employment in policy work which does not involve a substantial research component.

The major sequence in Policy Studies consists of at least 42 units of credit in courses offered by the School of Social Science and Policy of which no less than 6 and no more than 12 units of credit must be from Level 1 courses and no more than 6 units of credit from approved courses offered by other schools. Students should consult the School for a list of these approved courses.

Honours Level

The BSocSc Honours degree may be taken in two ways. All programs require completion of fourth year seminars and a substantial research project:

1. Social Science and Policy Honours, with a Major in an approved area

Prerequisite: Completion of the minimum requirements for a BSocSc Pass degree including the 48 units of credit BSocSc core program, SLSP3911 Inquiry and Interpretation in the Social Sciences, and a Major concentration in an approved area, both with a good Credit or better average.

2. Combined Social Science and Policy Honours (Research)

Prerequisite: Completion of the minimum requirements for a BSocSc Pass degree including the 48 units of credit BSocSc core program, SLSP3911 Inquiry and Interpretation in the Social Sciences or equivalent in the relevant school, and the prerequisites for Combined Honours in the school/department in which the student has taken an approved Major concentration, both at a level of performance determined by the relevant course authorities.

Honours in Policy Studies in the Bachelor of Arts

Entry to honours in Policy Studies requires completion of 54 units of credit with a Credit or better average in courses offered by the School of Social Science and Policy, including at least 6 Level 1 units. The 54 units of credit may include up to 12 units of credit taken from approved courses offered by other schools and must include the following:

SLSP2000	Political Economy and the State
SLSP2002	Policy Analysis Case Studies
SLSP3000	Social Theory and Policy Analysis
SLSP3911	Inquiry and Interpretation in the Social Sciences

Level 1

SLSP1000	Social Science & Policy	S1
SLSP1001	Research & Information Management	S2
SLSP1002	Introduction to Policy Analysis	S2

Upper Level

SLSP2000	Political Economy and the State	S1
SLSP2001	Applied Social Research 1	S1
SLSP2002	Policy Analysis Case Studies	S2
SLSP2701	The Theory and Practice of Development	S1
SLSP2820	Crime and Punishment in Historical Perspective	S2
SLSP3000	Social Theory and Policy Analysis	S1
SLSP3001	Applied Social Research 2	S1
SLSP3002	Social Science and Policy Project	S2

Advanced Upper Level Course

SLSP3911	Inquiry and Interpretation in the Social Sciences	S2

Honours Level

SLSP4000	Social Science and Policy Honours (Research) Full-Time
SLSP4050	Social Science and Policy Honours (Research) Part-Time
SLSP4100	Policy Studies Honours (Research) Full-Time
SLSP4150	Policy Studies Honours (Research) Part-Time
SLSP4500	Combined Social Science and Policy Honours (Research) Full-Time
SLSP4550	Combined Social Science and Policy Honours (Research) Part-Time

Social Work

Coordinator: Professor Richard Hugman

School Office: Room 1519, Mathews Building

Administrative Assistant: Maggie O'Keefe

Administrative Officer: Christina Mangos

Email: Social.Work@unsw.edu.au

Website: <http://socialwork.arts.unsw.edu.au>

At the undergraduate level, the School of Social Work offers programs leading to the award of the degree of Bachelor of Social Work, and the combined degrees of Bachelor of Social Work/Bachelor of Laws, Bachelor of Social Work/Bachelor of Arts and Bachelor of Social Work/Bachelor of Social Science.

Bachelor of Social Work

The BSW degree (program **4031**) is designed to prepare students for the professional practice of social work. It is expected to be undertaken as a four year full-time program, although part-time enrolment can be negotiated. The Honours program is available to students who have achieved appropriate results.

The aim is to produce a social worker who has a general foundation for continuing professional learning, and can undertake independent professional practice at a basic level of competence, utilising relevant knowledge and skills in accordance with the profession's values. Some courses are subject to prerequisite and corequisite requirements.

Year 1 - Level 1

Session One

SOCW1001	Introduction to Social Work*	6
	Psychology Elective	6
	Sociology Elective	6
	Level 1 Arts Elective	6

Session Two

SOCW1002	Communication and Social Work Practice*	6
SOCW1003	Human Behaviour 1*	6
	Level 1 Arts Elective	6
	Level 1 Arts Elective	6

UOC

Year 2 - Upper Level**Session One**

SOCW2001	Human Behaviour 2*	6
SOCW2002	Society and Social Work 1*	6
SOCW2005	Research for Social Work*	6
	General Education Elective	3
	General Education Elective	3
SOCW2007	Social Work Practice – Bridge **	3

Session Two

SOCW2004	Society and Social Work 2*	6
SOCW2003	Social Work Practice: Individuals, Families and Groups 1	6
SOCW2006	Social Work Practice – Community Work	6
SOCW2100	Aboriginal People and Social Work	6

Year 3 - Upper Level**Session One**

SOCW3002	Social Work Practice: Individuals, Families and Groups 2	6
SOCW3001	Social Work Practice – Third Year Practicum	12
	General Education Elective	3
	General Education Elective	3

Session Two

SOCW3004	Social Policy 1*	6
SOCW3008	Social Work Practice – Selected Studies 1	6
SOCW3006	Socio-Legal Practice*	6
	Research Elective	

or

SOCW3005	Research Honours	6

Year 4 - Upper Level**Session One**

SOCW4002	Social Work Practice in Organisations	6
SOCW4003	Social Work Practice – Selected Studies 2	6
SOCW4004	Social Philosophy*	6
SOCW4006	Social Policy 2*	6

or

SOCW4005	Social Policy Honours	6

Session Two

SOCW4010	Social Work Practice – Fourth Year Practicum	24

Year 5 - Honours**Session One**

SOCW4800	Honours Thesis	24

*Students outside the School of Social Work may take these as electives.

**Students who have gained entry to the 2nd year of the program with a Welfare Diploma must complete this course.

Bachelor of Social Work Bachelor of Arts

The School also offers a combined Bachelor of Social Work/Bachelor of Arts. This is a five year program leading to the award of the two degrees of Bachelor of Social Work and Bachelor of Arts. An Honours program is available to students who have achieved appropriate results.

For details regarding the Bachelor of Social Work/Bachelor of Arts program, refer to the section 'Program Rules and Information'.

Bachelor of Social Work Bachelor of Social Science

The School also offers a combined Bachelor of Social Work/Bachelor of Social Science. This is a five year program leading to the award of the two degrees of Bachelor of Social Work and Bachelor of Social Science. An Honours program is available to students who have achieved appropriate results.

For details regarding the Bachelor of Social Work/Bachelor of Social Science program, refer to the section 'Program Rules and Information'.

Sociology and Anthropology

Coordinator: Professor Michael Humphrey

School Office: Room 159, Morven Brown Building

Tel: (02) 9385 1807

Email: sociology@unsw.edu.au

Website: <http://sociology.arts.unsw.edu.au>

Sociology is a discipline for students with a special interest in human relationship and the multiplicity of interactive cooperation, conflict and communication which constitutes any society. The School of Sociology

and Anthropology offers a diverse program where students may choose courses in sociology, social anthropology, cultural theory, cultural studies, sociological approaches to communication and the public media, political sociology and policy-related studies.

Level 1

First year sociology offers a broad introduction to sociology as a profound and productive way of describing, analysing and understanding society. Students commencing their first year in 2006 of studying Sociology and Anthropology can choose between four introductory courses. Those students intending to take a major must do two first year courses. As the course descriptions indicate, Level 1 courses may focus on different societies and cultures, but each is an introduction for university students beginning their study of the discipline and is preliminary and prerequisite for more advanced study in later years of the degree.

SOCA1002	Australian Society	S2
SOCA1004	Relationships: Sociology and Everyday Life	S1
SOCA1005	Australia's Media: Sociological Perspectives	S2
SOCA1006	Introduction to Globalisation	S1

Major Sequence

Students must complete 42 units of credit in order to gain a major in Sociology, including 12 units of credit in Level 1 courses and at least 12 units at Level 3.

While a major in Sociology consists of 42 units of credit, students may extend their study further and take one or two more sociology courses as part of their program.

Part-time (Evening) Study

Part-time and evening students are advised that the School teaches selected first year and Upper Level courses in the evening. It is possible to complete a major in Sociology by attending evening classes.

Upper Level Courses

SOCA2103	Globalisation and Fragmentation	S2
SOCA2104	Technology, Work, Culture	S1
SOCA2106	Cities: Experiencing Sydney	S1
SOCA2108	Social Anthropology: Diversity, Difference, Identity	S1
SOCA2110	Anthropology: Identity and the Cinema	S2
SOCA2204	Anthropology Research Fieldwork	S2
SOCA2205	Society and Desire	S2
SOCA2206	Embodiment	S2
SOCA3103	Professions	X2
SOCA3104	Global Migration, Global Refugees	S1
SOCA3203	Oceanic Societies: Pacific Island Living	S1
SOCA3206	Anthropology of Celebration	S2
SOCA3208	Colonisation and Indigenous Identity Formation	S1
SOCA3209	Indigenous Australia: Gendered Identities	S2
SOCA3210	Whiteness – Beyond Colour: Identity and Difference	S1
SOCA3211	Development and Modernity	S2
SOCA3212	Environment, Society and Culture	S1
SOCA3301	Critical Reason: Modern Sociological Theory	S1
SOCA3407	Australian Migration Issues	X1
SOCA3409	Crime, Gender and Sexuality	X1
SOCA3410	Deviance	X2
SOCA3411	Forensic Sociology	S1
SOCA3605	Quality of Life	S1
SOCA3607	Sociology of Ageing	S1
SOCA3702	Social Power: Theories and Structures	S1
SOCA3703	Nationalism, Citizenship and Cultural Identity	S2
SOCA3806	Medicine, the Body and Culture	S1
SOCA3912	Risk and Trust in Modern Society	S2

Honours Program

Honours in Sociology and Anthropology requires a further year of study after completing the requirements for a Pass degree including a more concentrated study of Sociology in second and third year. Students who are achieving good grades are encouraged to plan a four-year program leading to an Honours degree in Sociology and Anthropology.

The last year of studying for an Honours degree is directed to students' development of research and writing skills which will prepare them for entering a career or proceeding to postgraduate research studies. The experience will provide skills in critical thinking, research and writing that will be invaluable in future pursuits, whether academic or otherwise.

Honours Entry

Prior to enrolment in the Honours year, students must have:

- completed up to 54 units of credit in Sociology, including no more than two Level 1 Sociology courses;
- achieved an average of 70%.

All students should consult with any of their lecturers during the second year of enrolment about the Honours year and the courses to be taken in preparation for that enrolment.

Combined Honours Entry

Students may also undertake a combined Honours program in Sociology and another approved discipline. Prior to enrolment in the Honours year, students must have:

- completed up to 48 units of credit in Sociology, including no more than two Level 1 Sociology courses;
- achieved an average of 70%;
- completed the requisite number of units of credit at a standard set by the other School in the combined Honours program.

Honours Level

SOCA4000	Sociology Honours (Research) Full-Time
SOCA4050	Sociology Honours (Research) Part-Time
SOCA4500	Combined Sociology Honours (Research) Full-Time
SOCA4550	Combined Sociology Honours (Research) Part-Time

Spanish and Latin American Studies

Coordinator: Dr Peter Ross

Tel: (02) 9385 2421/2418

Email: p.ross@unsw.edu.au

Website: <http://languages.arts.unsw.edu.au/spanish/spanish.html>

The Department of Spanish and Latin American Studies offers a major in the Faculty of Arts and Social Sciences. Major sequences may be followed in language, literature, cultural studies and/or history. Spanish is also available to students of other faculties as a co-major, minor, elective or as a major in the Diploma in Languages. A major in Spanish and Latin American history may be completed with no knowledge of Spanish but a reading knowledge of the language is a prerequisite for entry to the Honours year.

Major Sequences

Major sequences in Spanish language/literature/cultural studies require 42 units of credit in SPAN courses including at least 6 units of credit (UOC) from Upper Level Spanish electives. One approved course with a MODL prefix may be credited towards a Spanish major. All courses have a value of 6 UOC.

Students with prior knowledge of the Spanish language will sit for a placement test in order to gain entry to an appropriate language course.

1. Language courses

Elementary Level

SPAN1001	Introductory Spanish 1A	S1
SPAN1002	Introductory Spanish 1B	S2

Intermediate

SPAN2003	Intermediate Spanish A	S1
SPAN2004	Intermediate Spanish B	S2

Advanced

SPAN3003	Advanced Spanish A	S1
SPAN3004	Advanced Spanish B	S2

2. Literature, Cultural Studies, and Linguistics Upper Level Courses

SPAN3040	Spanish Linguistics	S1
SPAN3339	Latin American Culture and Globalisation: From Macondo to McOndo	S2
SPAN3343	Topics in Latin(o) American Cinema	S1
SPAN3345	Spanish as a World Language	S2

3. History Stream

A major in History in the Department requires 42 units of credit including SPAN2428 and SPAN3401.

Year 1

SPAN1001 and SPAN1002, or other approved 12 units of credit in Level 1 courses from History, Economic History, Development Studies, Politics and International Relations, and Sociology and Anthropology.

Years 2 and 3

SPAN2428 and SPAN3401 +18 Upper Level units of credit from the Department's history, literature/cultural studies/linguistics/ language options (entry to these courses may require a certain level of fluency in the Spanish language).

Upper Level History courses

SPAN2406	Modern Spain: From Loss of Empire to European Integration	S1
SPAN2421	Special Topic in Latin American History 1	S1
SPAN2425	The Americas Before Columbus	S2
SPAN2428	(Un)Making the Third World: History and Global Development B	S1
SPAN2429	(Un)Making the Third World: History and Global Development A	S2
SPAN2431	The United States and Changing Global Orders	S2
SPAN3401	Colonising the Americas: The Spanish and Portuguese Empires	S1
SPAN3422	Special Topic in Latin American History 2	S2

Honours Entry

Prerequisite: At least 54 units of credit in SPAN courses or other approved courses at a Credit level of 70% or better. Students are reminded that they must have a proven reading competence in Spanish before they can be admitted to an Honours program. Honours theses may be written in English or Spanish.

Students thinking of doing Honours can consult any member of staff at any time during their undergraduate years and should obtain the advice and approval of the Head of Department in the third year of study prior to enrolment.

Combined Honours Entry

Prerequisite: At least 48 units of credit in SPAN courses or other approved courses at a Credit level of 70% or better. Students wishing to undertake study at Honours Level in Spanish and Latin American Studies and another discipline should enrol in SPAN4500 Combined Honours (Research).

Honours Level

SPAN4000	Spanish and Latin American Studies Honours Full-Time
SPAN4050	Spanish and Latin American Studies Honours Part-Time
SPAN4500	Combined Spanish and Latin American Studies Honours Full-Time
SPAN4550	Combined Spanish and Latin American Studies Honours Part-Time

Surveying and Spatial Information Systems

Coordinator: Professor Chris Rizos

School Office: Room 426, Electrical Engineering

Email: l.daras@unsw.edu.au

Tel: (02) 9385 4182

Website: www.gmat.unsw.edu.au

The School of Surveying and Spatial Information Systems offers two Upper Level courses in the Faculty of Arts and Social Sciences. The courses (listed below) are of particular interest to students majoring in Environmental Studies or other majors where knowledge of mapping, geographic information and its analysis is increasingly required. Many decisions made on future developments in the community will affect the environment. To be able to manage these developments, knowledge of the relative positions of objects and features on the terrain will be required.

GMAT3500 covers the acquisition and analysis of images from air and space for determining details of features and terrain cover types and GMAT0753 deals with the management and analysis of spatial data. Excellent facilities are available in the School for these courses. Further details can be obtained from the School.

The courses involve an integrated approach to the acquisition, analysis, storage, distribution, management and application of spatially-referenced data. The School also offers other courses that embrace the traditional area of surveying and mapping, as well as the comparatively new fields of remote sensing and spatial information systems.

Fields of specialisation within Surveying and Spatial Information Systems, also known as Geomatics, include: Satellite Surveying (position determination techniques using satellite signals); Geodesy (determining the mathematical model of the Earth, and its gravity field, and the practice of control network surveying); Engineering Surveying (precise surveying for engineering projects); Cadastral Surveying (knowledge of the laws and practices for survey of property boundaries); Land Management and Development (environmental assessment and design for resource

management and change of land use); Land Information Management (the use of computer-based information systems of spatially related data for planning and administration purposes); Geographic Information Systems (computer-based information systems for environmental assessment and monitoring); Photogrammetry and Remote Sensing (the use of airborne and spaceborne equipment to remotely sense images for mapping, monitoring and resource surveys).

Upper Level

GMAT0753 Introduction to Spatial Information Systems
GMAT3500 Photogrammetry & Remote Sensing

Note: Surveying is not available as a major sequence within the Faculty of Arts and Social Sciences.

Women's and Gender Studies

Coordinators: Dr Elizabeth McMahon and Dr Brigitta Olubas, School of English

Office: Room 145, Morven Brown

Tel: (02) 9385 2298

Email: womenstudies@unsw.edu.au

Website: www.arts.unsw.edu.au/womenstudies/

The undergraduate program in Women's and Gender Studies enables students to construct an interdisciplinary major focusing on feminist scholarship, debates and issues and the study of women, gender and sexualities.

The Level 1 core course WOMS1001: Introduction to Feminism, convened by the Coordinator/s is designed to introduce students to some central preoccupations of feminist theorising from a range of perspectives and positions. Other Level 1 and Upper Level courses are taught and administered through different Schools in the Faculty and offer a range of disciplinary and interdisciplinary approaches.

Major Sequence

Women's and Gender Studies may be taken as a major sequence. This requires the completion of a total of 42 units of credit in Women's and Gender Studies approved courses (listed below). Students must complete the program's introductory core course at Level 1, WOMS1001, as well as two further core courses. The remaining 24 units of credit (or 4 courses) may be selected either from other core offerings or from the list of electives.

List A

Level 1 Core Courses

WOMS1001	Introduction to Feminism	S2
WOMS1003	Women, Gender and World History	S1

Upper Level Core Courses

WOMS2001	Twentieth Century Women Writers*	
WOMS2002	Gender, Race, Nature and Reason*	
WOMS2003	A History of Sexualities	S2
WOMS2004	Sex, Human Rights and Justice	S2
WOMS2005	Society and Desire	S2
WOMS2006	Sexuality and Power: The Social Relations of Sex and the Sexes	S1
WOMS2104	Women and Men: Gender in Australia*	
WOMS2105	Women in Southeast Asian Societies*	
WOMS2106	Embodiment	S2
WOMS3005	Australian Masculinities: Reading Gender, Sex and Culture*	
WOMS3006	Crime, Gender and Sexuality	X1

List B

Upper Level Electives

ARTS3010	Feminist Thought and Action	X1
CHIN2303	Gender in Contemporary Chinese Culture and Society	S2
ENGL2101	Women on the Shakespearean Stage	S2
ENGL2621	Contemporary Australian Women Writers	S2
GREK3501	Pandora's Box	S1
GREK3502	Greek Women Writers	S2
HIST2015	Women in the Modern World	S2
HIST2050	Women in Southeast Asian Societies *	
HIST2080	Rights and Riots: Gender & Politics in 18th-century France*	
HIST2721	Feminism, A History: Transnational Issues, Ideas and 'Difference'*	
HIST3907	Clio's Craft: Writing Feminist Histories	S2
JAPN3602	Gender and Sexuality in Contemporary Japan *	
KORE2601	Gender/Politics in Korean Literature	S2
PHIL2419	Existential Phenomenology and its Critics *	
PHIL2517	Representation and Sexual Difference	S1
POLS2043	Free Speech	S1
POLS2047	Human Rights and Wrongs in Australia*	
SAHT2642	Art, Gender, Sexuality and the Body*	
SOCA3209	Indigenous Australia: Gendered Identities	S2
SOCA3410	Deviance	X2
SOCA3704	Social Movements and Society: Current Debates*	
SOCA3812	Post-Human Subjects*	
SPAN3343	Topics in Latin(o) American Cinema	S1
SPAN3350	Performing Passion & Pain: The Case of Frida Kahlo*	

*Not offered in 2006.

Honours Entry

Students who have met the requirements for a major in Women's and Gender Studies may apply to be admitted to a Combined Honours Program in Women's and Gender Studies together with an approved discipline (from the A, B or C lists). The normal requirement for a student seeking admission to a Combined Honours Program is 48 units of credit in approved WGS courses (including WOMS1001 and 2 Upper Level core courses) at 70% average or better. Students may request to substitute up to 6 units of credit of the Women's and Gender Studies component with other courses particularly relevant to their proposed topic areas. This will be decided at the discretion of the Program Coordinator. When a student undertakes Combined Honours, arrangements are made between the relevant Schools or programs to determine, in conjunction with the student, the thesis topic, the Honours courses undertaken and the supervisors. In the case of WGS, students would be expected to do either one 2 hour per week seminar or a reading program for one session (see WOMS4500 or WOMS4550) in addition to a thesis on an approved topic, with joint supervision, if appropriate.

Honours Level

WOMS4500	Combined Women's and Gender Studies Honours (Research) Full-Time
WOMS4550	Combined Women's and Gender Studies Honours (Research) Part-Time

Faculty of the Built Environment

A Message from the Dean

Welcome to the Faculty of Built Environment (FBE) at UNSW. I hope you find the information in this Handbook helpful in understanding the programs offered in our Faculty. The structure of FBE is unique in Australia in the range of disciplines it offers including Architecture, Building, Industrial Design, Interior Architecture, Landscape Architecture and Planning & Urban Development. FBE is structured to encourage synergy between the disciplines and flexibility for students in the range of courses they can take. Students have the opportunity to gain both expertise in their chosen disciplines and to become familiar with the concepts and ideas of the other disciplines in the Faculty. In reading this Handbook you will discover the wide range of courses on offer.

The undergraduate and postgraduate programs offered by the Faculty are well established and well regarded by employers. Each program integrates the academic knowledge and practical skills required for professional practice. Undergraduate students also have the option of selecting from a number of combined degrees offered in conjunction with other faculties.

Around 20 per cent of our students are international students. FBE has a reputation for the excellence of its staff and students and is professionally recognised nationally and internationally. The Faculty receives strong industry support and extensive international academic links provide opportunities for exchange and collaboration in learning and research.

If you have further questions after reading through this Handbook, please do not hesitate to obtain advice from your lecturers and from the Faculty administrative staff at all stages of your study. You may also wish to visit FBE's website at: www.fbe.unsw.edu.au

Peter A Murphy
Dean
Faculty of the Built Environment

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Faculty Information and Assistance

Who Can Help?

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of the Built Environment.

If you require advice about enrolment, degree requirements, progression within programs, information and advice about course content and requirements, contact the Faculty Student Centre, Level 3, Red Centre Building.

To speak to any of the Undergraduate Program Heads, you need to make an appointment through the Undergraduate Programs Office located on Level 4, Red Centre Building.

For assistance with access to the computing resources of the Faculty, please visit the Built Environment Computing Unit office located in room 2032, Level 2, Red Centre Building.

The Faculty of the Built Environment Website

Please refer to the Faculty website for further information. The website provides detailed information on the Faculty's programs, staff, research and events as well as exhibits of student work and an extensive online learning resource. Here you will find ready information on almost any matter that affects your life within the FBE: www.fbe.unsw.edu.au

The Faculty

The Faculty of the Built Environment offers the following undergraduate degree programs: BArch, BSc(Arch), BIA, BBCM, BIndDes, BLArch and BPlan. These programs provide professional education in the fields of architecture, industrial design, building, quantity surveying, interior architecture, landscape architecture and planning. Put more generally, these programs provide education and training in the arts and sciences involved in the design and construction of buildings, in the development of cities, in landscape design and the development of manufactured products. In addition to professional and vocational training, the programs include general education courses to provide graduates with a broad understanding of the humanities and the social sciences. In addition, the Faculty offers a range of combined degrees with other faculties such as Arts and Social Sciences, Law and the Institute of Environmental Studies.

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

Computing Information

The Faculty has five major computing laboratories containing 80 personal computers available for general use by students in the Faculty. These laboratories are used for teaching formal classes, as well as providing general network and computing access for students 24 hours a day. The computers are higher end PC workstations configured to support a wide range of applications including: CAD, modelling, rendering, visualisation, multimedia presentations, GIS, analysis, general office applications and much more. The Faculty's Resource Centre and Postgraduate labs add a further 40 computers to this mix which is complemented by the student accessible wireless networking in and around the Faculty.

These laboratory resources are supported by a range of devices and services from standard printers, plotters and scanners to notebooks, digital cameras and projectors for presentations. The Faculty offers a printing service providing large format colour printing, photo-quality output and laminating. This will allow student presentations to exceed professional quality. The labs provide an environment where the computing technology can be utilised throughout the wide range of courses offered across the Built Environment's disciplines.

All these computers are connected to the Campus Wide Network, providing secure online file storage, access for students to the information resources supported by the Faculty and the University generally, as well as the international resources of the Internet.

Student Ownership of Personal Computers

The Faculty encourages all students to consider the purchase of a personal computer to support their studies. The prevailing policy is that the Faculty endeavours to provide for the high-end computing needs of students in the belief that many students are able to meet their own needs for more basic applications. To that end, the Faculty publishes a document which is available on the website, providing advice to students regarding the purchase of personal computers, software and network connectivity.

Enrolment Procedures

All students re-enrolling in the Faculty will re-enrol online via myUNSW. Instructions can be found on the FBE website.

Faculty Electives

The Faculty offers a broad range of over 100 elective courses that may be selected as part of any of the undergraduate programs. They are also generally available to all students in the University, subject to appropriate prerequisite knowledge. These may be identified in the course descriptions at the end of this Handbook as they all have course codes in the form BENVXXXX. These courses are generally offered in only one session each year and students are advised to check availability and timetabling for these electives on the Faculty website.

In addition, students may take many of the core courses associated with the other programs in the Faculty as electives. Details of these options are explained on the website.

General Education Requirements

The University's basic requirements are the same for students in all single degree programs.

(a) Students must satisfactorily complete a minimum of 12 units of credit in General Education courses or their equivalent (unless entitled to exemption as prescribed in the University rules). Combined degrees offered with another faculty are deemed to satisfy this requirement within the prescribed program.

(b) Students must undertake 56 hours of study which examine the purposes and consequences of their university education and which fosters socially, ethically and professionally responsible behaviour. Most programs in the Faculty of the Built Environment fulfill this requirement as part of the normal program curriculum. However, in the case of both the BBCM and BSc(Arch) programs, students are required to take BENV1382 Social Responsibility and Professional Ethics in part fulfillment of this requirement.

Student Exchange

The University has established an extensive and growing number of student exchange programs with universities around the world. The Faculty strongly encourages all students to consider participating in one of the

programs for one or two semesters. Contact UNSW Exchange Office for detailed information on course options and scholarships or refer to the website: www.international.unsw.edu.au

Societies and Clubs

The Faculty of the Built Environment has a number of student clubs including BIAS (Bachelor of Interior Architecture Students), TAC (The Architecture Club), BUGS (Building Undergraduate Society), IDSOC (Industrial Design Society), SOLA (Society of Landscape Architects) and OOPS (Organisation of Planning Students).

Faculty of the Built Environment Resource Centre

The Resource Centre is located on the ground floor of the Red Centre Building and serves the day-to-day needs of the staff and students in the Faculty. It provides information services based on both print and electronic resources. The reference collection, which has no lending facilities, consists of textbooks and recommended reading, background information to programs, serials and standards (these being duplicated in the Physical Sciences Library). Unique materials held consist of donations, undergraduate theses, trade catalogues and an open reserve collection of specific materials left by lecturers to supplement program work.

The Resource Centre computers provide access to library catalogues and other online databases, email facilities and the Internet and six of the computers have word processing facilities. Photocopying facilities are also provided.

Assistance is provided by the librarian in using the Centre's resources and developing information retrieval skills. In addition, a printed guide on how to use the Resource Centre is issued to each student. During Session 1 & 2, the Resource Centre is open from 8.30am to 6.00pm Monday to Thursday, 8.30am to 4.00pm on Friday. Out of session, the Resource Centre is open from 8.30am to 4.00pm Monday to Friday, closed all January, weekends and public holidays.

Faculty Regulations for Undergraduate Study

1. Open Elective courses may be selected from any program offered at the University of New South Wales, provided such course has not been taken to fulfill any other requirement of the Degree Rules. There is a wide range of electives offered within the Faculty. Open electives selected outside the Faculty of the Built Environment are subject to the approval of the Faculty. Open Electives may also be selected from courses offered by other institutions, but only with the approval of the Program Head and at an agreed unit value approved by the Program Head.

2. As a general guide, expected normal student workload is 2 hours per week per unit of credit, including both class contact time as well as individual study, completion of assigned work and exam preparation where appropriate. Students are strongly advised not to over commit themselves to paid work or voluntary activities that will impinge on that level of time commitment to their studies. Such external commitments will not be taken into consideration in relation to matters such as extensions of time for submission of project work or failure to attend classes or examinations.

3. Where reference is made to the requirement that a student complete units of credit by taking one or more courses, that requirement shall be construed as meaning that the student shall:

- attend at least 80% of all lectures, studios, tutorials or other classes, including site visits or other activities as may be prescribed in that course, always maintaining a satisfactory standard of preparation for and participation in such classes and activities.
- perform satisfactorily in such exercises, essays, theses, and other work (whether written, oral or practical) as may be prescribed in that course, and undertake any prescribed reading related to that subject.
- achieve a satisfactory standard in all examinations and other assessable tasks assigned for that course.

4. In general, students admitted with advanced standing into programs within the Faculty are given units of credit towards the degree for all appropriate courses completed at UNSW or other approved institutions. This is in the form of full session exemptions and/or specified exemptions in particular courses. Such credit will not normally be given for study undertaken more than 7 years before the date of admission to the program, except with the approval of the Program Head.

5. Notwithstanding any advanced standing that may have been granted upon entry to a program, students may seek exemptions in specific courses on the basis of appropriate study or experience. Where such an exemption is granted for study at an approved institution, students are normally awarded the appropriate units of credit, unless such credit

has already been allowed as part of admission with advanced standing. Where the exemption is granted on the basis of knowledge or skills gained through experience, students would normally be required to complete the equivalent units of credit as open electives.

6. In general, progression in all programs offered by the Faculty is managed by individual course prerequisites. Except with the permission of the Program Head, students are required to complete all stated prerequisites before enrolling in any course, and must always repeat any failed course on the next occasion that it is offered.

7. Except with the permission of the Program Head, where two courses are shown as corequisite, they must be taken concurrently on the first occasion any one is attempted.

8. Students wishing to take courses additional to those required for the award should be aware that the relevant courses will attract an additional fee, payable up front.

9. Students may not enrol in two design studios as core courses in any one session.

Program Rules and Information

3255 Bachelor of Interior Architecture

BIA

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Head: Judith O'Callaghan

Program Description

Interior Architecture is the specialist area of architecture concerned predominantly with interior environments.

The professional practice of the discipline demands simultaneously a broad theoretical as well as a focused practical education in both the art and the science of architecture and design. The interior designer must have a professional understanding and concern for client and community in a seamless integration of the work with all elements of the built environment. (It should be noted that, unlike elsewhere in the world, use of the title 'Interior Architect' in Australia is not permitted under current Australian legislation).

The Bachelor of Interior Architecture is a four-year full-time semester-based program consisting of core and elective courses with design as the central concern. The Design Studio is the focus for the application of the theoretical material delivered in all courses in the program as well as developing and presenting its own.

Program Objectives and Learning Outcomes

On completion of the program, students will have attained a sound knowledge base in the field of Interior Architecture.

Program Structure

Year 1

Session One

INTA2101	Design Studio 1	(6 UOC)
INTA2111	Theory 1	(3 UOC)
INTA2121	History 1	(3 UOC)
INTA2141	Communications 1	(6 UOC)
INTA2171	Technology 1	(6 UOC)

Session Two

INTA2172	Technology 2	(6 UOC)
INTA2102	Design Studio 2	(6 UOC)
INTA2112	Theory 2	(3 UOC)
INTA2122	History 2	(3 UOC)
INTA2142	Communications 2	(6 UOC)

Year 2

Session One

INTA2271	Technology 3	(3 UOC)
INTA2201	Design Studio 3	(6 UOC)
INTA2211	Theory 3	(3 UOC)
INTA2221	History 3	(3 UOC)

INTA2241	Communications 3	(3 UOC)
General Education/Open electives		(6 UOC)

Session Two

INTA2272	Technology 4	(3 UOC)
INTA2202	Design Studio 4	(6 UOC)
INTA2212	Theory 4	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
INTA2222	History 4	(3 UOC)
General Education/Open electives		(6 UOC)

Year 3

Session One

INTA2371	Technology 5	(3 UOC)
INTA2301	Design Studio 5	(6 UOC)
BENV1341	Design Modelling and Visualisation	(3 UOC)
General Education/Open electives		(12 UOC)

Session Two

INTA2372	Technology 6	(3 UOC)
INTA2302	Design Studio 6	(6 UOC)
INTA2382	Professional Practice 1	(3 UOC)
General Education/Open electives		(12 UOC)

Year 4

Session One

INTA2401	Design Studio 7	(6 UOC)
INTA2411	Dissertation	(6 UOC)
INTA2441	Project Research	(6 UOC)
Open electives		(6 UOC)

Session Two

INTA2402	Graduation Project	(15 UOC)
INTA2482	Professional Practice 2	(3 UOC)
Open electives		(6 UOC)

Student Exchange

Students in the BIA program may go on exchange any time after the completion of Year 2.

Honours

The Bachelor of Interior Architecture degree may be awarded with Honours based upon the quality of performance in the program and in accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Academic Rules

1. The degree of Bachelor of Interior Architecture is awarded at either Pass or Honours level after the successful completion of a minimum of 192 units of credit.

2. To fulfil these requirements, students must complete:

- 144 units of core courses, being all those prescribed in the Faculty regulations for this program;
- 18 units of open electives, selected in accordance with the Faculty regulations for undergraduate study in the Faculty of the Built Environment;
- 18 units of FBE electives, selected in accordance with the Faculty regulations for this program;
- 12 units of General Education courses in accordance with University requirements.

3. The standard duration of the program is 4 years consisting of 8 semesters of full-time study (24 units of credit per semester).

4. General Education courses may not be taken before a student enters Year 2 of the Program.

Professional Recognition

The UNSW degree of Bachelor of Interior Architecture is recognised by the Design Institute of Australia (DIA - the professional body representing Interior Architecture/Interior Design in Australia) and the International Federation of Interior Architects (IFI). Students enrolled in the program are eligible to apply for student membership of the DIA and Associate membership upon graduation. Full membership requires two years of approved professional experience after graduation.

The BIA program at UNSW is also a member of IDEA (Interior Design/Interior Architecture Educators Association) representing all 4 year university degree programs in the discipline in the region.

3260 Bachelor of Architecture

BArch

Typical Duration

5.5 years

Minimum UOC for Award

264 units of credit

Typical UOC per Session

24 units of credit

Program Head: To be advised

Program Description

The Bachelor of Architecture degree provides academic education and practical experience leading to professional qualifications in architecture. It requires full time attendance for five years plus six months work experience that must be completed prior to the Graduation Project.

Progression through the program is by years, each comprising two semester-long design studios and their corresponding corequisites. In most years these design studios and corequisites may be taken in either order in any one year to facilitate mid-year entry to the program where required. However courses must be taken in the session they are offered at the first available opportunity. Admission to each year is subject to the successful completion of the preceding design stages and a majority of their corequisite courses, except where approval has been given by the Program Head.

Program Objectives and Learning Outcomes

There are two central goals. The primary goal is to equip students with the theoretical and practical knowledge, skills and techniques needed for the design, documentation and administration of building construction. A more general goal is to provide students with an all-round general problem-solving education. Lectures and practical sessions cover theoretical knowledge in the following areas:

- Architectural Design
- Architectural Communications
- Architectural History and Theory
- Architectural Technology
- Architectural Practice

Program Structure

Year 1

Session One

ARCH1171	Architectural Technologies 1	(9 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
ARCH1121	Architectural History and Theory 1	(4 UOC)
BENV1101	Design Fundamentals: Studio 1	(8 UOC)

Session Two

ARCH1172	Architectural Technologies 2	(8 UOC)
ARCH1102	Architectural Design Workshop 1	(8 UOC)
ARCH1122	Architectural History and Theory 2	(4 UOC)
ARCH1142	Communications 1	(4 UOC)

Year 2

Session One

ARCH1271	Architectural Technologies 3	(6 UOC)
ARCH1201	Architectural Design Workshop 2	(8 UOC)
ARCH1221	Architectural History and Theory 3	(4 UOC)
ARCH1241	Communications 2	(3 UOC)
General Education		(3 UOC)

Session Two

ARCH1272	Architectural Technologies 4	(4 UOC)
ARCH1202	Architectural Design Workshop 3	(8 UOC)
ARCH1282	Research Practice	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
ARCH1222	Architectural History and Theory 4	(3 UOC)
General Education		(3 UOC)

Year 3

Session One

ARCH1371	Architectural Technologies 5	(4 UOC)
ARCH1301	Architectural Design Studio 1	(8 UOC)
BENV1341	Design Modelling and Visualisation	(3 UOC)
ARCH1321	Architectural History and Theory 5	(3 UOC)

Electives	(3 UOC)
General Education	(3 UOC)

Session Two

ARCH1302	Architectural Design Studio 2	(9 UOC)
ARCH1382	Practicum	(3 UOC)
Electives		(9 UOC)
General Education		(3 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Year 4

Session One

ARCH1401	Architectural Design Studio 3	(9 UOC)
Electives	(15 UOC)	

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Session Two

ARCH1470	Building Services 1 & 2	(6 UOC)
ARCH1381	Professional Practice 1	(3 UOC)
ARCH1402	Architectural Design Studio 4	(9 UOC)
Electives	(6 UOC)	

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Additional Requirement

(Completed after Year 1 and before Year 5)

ARCH1583	Work Experience	(24 UOC)

Year 5

Session One

ARCH1501	Investigation Workshop	(9 UOC)
ARCH1582	Professional Practice 2	(6 UOC)
Electives	(9 UOC)	

Session Two

ARCH1502	Graduation Project	(9 UOC)
Electives	(15 UOC)	

General Education Requirements

Students in this program must also satisfy the University's General Education requirements. For further information, please refer to the Academic Rules section and the General Education section in this Handbook.

Honours

The Bachelor of Architecture degree may be awarded with Honours based on the quality of performance in the program and in accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

In order to be considered for the University Medal, students must have completed at least 3 years of study towards their BArch degree at the University of New South Wales.

Academic Rules

1. The degree of Bachelor of Architecture is awarded at either pass or honours level after the successful completion of a minimum of 264 units of credit.

2. To fulfil these requirements, students must complete:

- 171 units of core courses, being all those prescribed in the in the faculty regulations for this program;
- 24 units of work experience completed after Year 1 and before Year 5 as prescribed in the faculty regulations for this program;
- 18 units of FBE electives, selected in accordance with the faculty regulations for this program;
- 39 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment;
- 12 units of General Education in accordance with University requirements.

3. The standard duration of the program is 5.5 years consisting of 10 semesters of full-time study (24 units of credit per semester) plus 1 semester of required work experience.

4. General Education courses may not be taken before a student enters Year 2 of the Program.

5. Students are not able to enrol in two design studios concurrently.

Professional Recognition

The Degree of Bachelor of Architecture from the University of New South Wales is accredited by the Board of Architects of New South Wales for the purpose of registration and is recognised by the Royal Australian Institute of Architects (RAIA).

Graduates are eligible for Graduate Membership of the Royal Australian Institute of Architects. Students enrolled in the BArch program (3260) or the BSc(Arch) program (3265) or any of the combined BArch programs are eligible to become Student Members of the Royal Australian Institute of Architects. SONA (Student Organised Network for Architecture Australia) is the national student organisation affiliated with RAIA.

In addition, for registration as an architect in NSW, candidates must satisfy the following requirements:

1. Produce evidence of two years approved work experience, at least one of which has been subsequent to the completion of the program; and
2. Pass an examination in Architectural Practice administered by the NSW Board of Architects.

Faculty Regulations for the BArch

FBE Electives

Faculty of the Built Environment (FBE) electives must be selected from those offered by the FBE. General Education Electives may not be substituted for either FBE or Open Electives.

Work Experience

Each student is required to undertake 24 weeks of off-campus activity in the pursuit of architectural work experience. Ideally, this is undertaken as a single block of time working in an architectural design office. Where this is the case and it overlaps a normal academic session, students should enrol in ARCH1583 and are not permitted to enrol in any other courses concurrently.

Work experience may also be carried out in several smaller components during summer breaks, provided that no such component is less than eight weeks in duration. Where this is the case, students must enrol in ARCH1583 for the summer session in which they are completing their work experience requirements.

If students wish to propose an alternative experience to that carried out in a registered architect's office, approval must be given by the Program Head. In all events, assessment is only within the terms of the course ARCH1583 Work Experience in the Bachelor of Architecture degree program. The Architecture Program takes no responsibility for any assessment or consideration for registration with the Board of Architects of New South Wales or membership of the Royal Australian Institute of Architects.

Composite Courses

Where a composite course is failed, all component parts must be repeated. This includes the courses in the technology core. To achieve a pass result in technology core courses, at least two components must be passed.

Progression

After Year 2, progression in the Design stream requires a pass level to be gained in the previous session's Design Studio. No two design studios can be taken concurrently.

A Progress Portfolio will be submitted at the end of third year as part of the assessment for ARCH1302 and to determine progression into fourth year of design. Similarly another Progress Portfolio will be submitted at the end of fourth year which will determine progression into final year.

A Progress Portfolio will also be submitted during third year as part of the assessment for ARCH1371 and to determine progression into the fourth year course ARCH1470.

3265 Bachelor of Science (Architecture)

BSc(Arch)

Typical Duration
3 years

Minimum UOC for Award
144 units of credit

Typical UOC per Session
24 units of credit

Program Head: Graham Bell

Program Coordinator: Stephen Peter

Program Description

This program provides an opportunity for students to undertake studies within the discipline of architecture, generally within a well-defined area of specialisation.

At present, a formal specialisation is offered in the area of architectural computing, but the opportunity exists for any major to be identified through consultation with the Program Coordinator. Where at least 24 units of electives and both research projects have been completed within the area of specialisation, then that major will be identified on the degree testamur. The program can also be undertaken with no identified major, in which case it is referred to as the generalist stream and no major is identified on the testamur at graduation.

The program is normally completed in three years of full-time study. Year 1 is taken in common with BArch students. In Year 2, students undertake courses in their area of specialisation. During Year 3 of the program, students undertake two research projects that provide an opportunity to explore areas of specialised interest in considerable depth.

The program allows students to select courses based on their interests. These could include: technology, history, theory and communications. The computing major educates students in architectural computing and allows students to specialise in an area of computing such as: computer-aided design (CAD), building modelling, rendering, animation, multimedia and IT management.

Program Objectives and Learning Outcomes

The Bachelor of Science (Architecture) degree is a three year full-time program with an optional fourth year for Honours. The first year introduces the fundamental concepts of Architecture and is undertaken as a common year with the Bachelor of Architecture program. During the second and third years, students concentrate on an area of specialisation. At present, the main area of specialisation is architectural computing.

Program Structure

Year 1

Session One

ARCH1171	Architectural Technologies 1	(9 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
ARCH1121	Architectural History and Theory 1	(4 UOC)
BENV1101	Design Fundamentals: Studio 1	(8 UOC)

Session Two

ARCH1172	Architectural Technologies 2	(8 UOC)
ARCH1102	Architectural Design Workshop 1	(8 UOC)
ARCH1122	Architectural History and Theory 2	(4 UOC)
ARCH1142	Communications 1	(4 UOC)

Year 2

Session One

ARCH1241	Communications 2	(3 UOC)
Electives		(18 UOC)
General Education		(3 UOC)

Session Two

ARCH1282	Research Practice	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
Electives		(15 UOC)
General Education		(3 UOC)

Year 3

Session One

BENV1382	Social Responsibility and Professional Ethics	(3 UOC)
ARCH1398	Research Project 1	(6 UOC)
Electives		(12 UOC)
General Education		(3 UOC)

Year 4

Session One

ARCH1498	Honours Project 1	(24 UOC)

Session Two

ARCH1499	Honours Project 2	(24 UOC)

Suggested Electives for the Computing Major

This table shows the recommended electives for Year 2 and 3 for the computing major. Note that students are required to complete 24 units of credit (and the 2 projects) to receive the major, while this recommended program includes 42 UOC of computing electives. It should be noted that students are not obliged to complete these electives in the order set out in the schedule. Also, the list is not an exhaustive list of the available computing electives, so some students may choose to complete courses not listed here.

Year 2**Session One**

BENV1042	World Wide Web in Presentation and Communication	(6 UOC)
Electives		(12 UOC)

Session Two

BENV2410	Advanced Webpage Design	(6 UOC)
BENV1043	Multimedia in Design Presentation	(6 UOC)
BENV2403	Information Technology in Design and Construction	(3 UOC)

Year 3**Session One**

BENV1341	Design Modelling and Visualisation	(3 UOC)
BENV2405	Computer Graphics Programming	(6 UOC)
BENV2406	Design and Computation	(3 UOC)

Session Two

BENV2409	Advanced Multimedia	(6 UOC)
BENV2404	CAD Management for Architects	(3 UOC)
Electives		(3 UOC)

General Education Requirements

It is UNSW policy that all students must complete up to 56 hours of study that fosters acceptance of professional and ethical action as well as social and environmental responsibility. The BSc(Arch) program satisfies half of that requirement within the courses that are taken in common with the BArch program. Taking the course BENV1382 Social Responsibility and Professional Ethics in the third year of study satisfies the remaining 28 hours.

Honours

The Bachelor of Science (Architecture) degree may be awarded with Honours after the successful completion of a two-semester Honours program following the completion of the BSc(Arch) program, and in accordance with current Faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Students must qualify by achieving a minimum Credit average during the first three years of study before being admitted to the Honours year.

Academic Rules

1. The degree of Bachelor of Science (Architecture) is awarded at Pass level after the successful completion of a minimum of 144 units of credit.
2. The degree of Bachelor of Science (Architecture) is awarded at Honours level after the successful completion of a minimum of 192 units of credit including 48 units in an approved Honours program.
3. To fulfil these requirements, students must complete:
 - 75 units of core courses, being all those prescribed in the faculty regulations for this program;
 - 18 units of FBE electives, selected in accordance with the faculty regulations for this program;
 - 39 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment;
 - 12 Units of General Education in accordance with University requirements.
4. A student may undertake a major by completing a minimum of 24 units in an approved disciplinary stream (in lieu of an equivalent unit value of open electives) plus undertaking approved topics related to that disciplinary stream for both the core Research Project courses (ARCH1398 and ARCH1399).
5. The standard duration of the program is 3 years consisting of 6 semesters of full-time study (24 units of credit per semester). This is extended by 1 year (or 2 semesters), if the Honours program is attempted.
6. General Education courses may not be taken before a student enters Year 2 of the Program.

3331 Bachelor of Building Construction Management**BBCM****Typical Duration**

4 years

Minimum UOC for Award

204 units of credit

Typical UOC per Session

24 units of credit

Program Head: To be advised

Program Description

The Bachelor of Building Construction Management is a four-year full-time program which allows students to specialise for careers in Construction and Project Management, Quantity Surveying, Property Development and Property Management.

The program is offered over a period of 4 years of full-time study, or a minimum of eight sessions, leading to the award of the degree of Bachelor of Building Construction Management (BBCM). The program is structured as follows:

- Years 1-3 consist of a fixed program of compulsory courses.
- Year 4 consists of electives and a compulsory thesis.

Program Objectives and Learning Outcomes

Students will acquire a sound foundation of knowledge which will prepare them for graduate careers in areas such as Construction and Project Management, Quantity Surveying, Property Development and Property Management.

Program Structure**Year 1****Session One**

BENV1141	Computers and Information Technology	(3 UOC)
BLDG1260	Construction Management 1	(6 UOC)
BLDG1281	Construction Law 1A	(3 UOC)
BLDG1121	Construction Science	(6 UOC)
BLDG1211	Construction Technology 1A	(6 UOC)

Session Two

BLDG1282	Construction Law 1B	(3 UOC)
BLDG1050	Structures 1	(6 UOC)
BLDG1212	Construction Technology 1B	(6 UOC)
BLDG1302	Construction Economics	(6 UOC)
GMAT0411	Surveying in Building and Construction	(3 UOC)

Year 2**Session One**

BLDG2052	Structures 2	(6 UOC)
BLDG2101	Construction Technology 2A	(6 UOC)
BLDG2280	Construction Management 2A	(6 UOC)
ACCT9003	Introduction to Accounting Principles	(3 UOC)
General Education		(3 UOC)

Session Two

BLDG2212	Construction Technology 2B	(6 UOC)
BLDG2482	Computer Applications in Construction	(3 UOC)
BLDG2332	Measurement & Documentation	(6 UOC)
BLDG2282	Construction Management 2B	(6 UOC)
General Education		(3 UOC)

Year 3**Session One**

BLDG3301	Advanced Measurement & Documentation	(6 UOC)
BENV1382	Social Responsibility and Professional Ethics	(3 UOC)
BLDG3101	Construction Technology 3A	(6 UOC)
BLDG3281	Construction Management 3A	(6 UOC)
General Education		(3 UOC)

Session Two

BLDG3284	Construction Management 3B	(6 UOC)
BLDG3402	Research Skills	(3 UOC)
BLDG3332	Construction Cost Estimating	(6 UOC)
BLDG3102	Construction Technology 3B	(6 UOC)
General Education		(3 UOC)

Additional Requirement

(to be completed before start of Year 4)

Successful completion of one of the following:

BLDG9998	Quantity Surveying Industry Program	(12 UOC)
BLDG9999	Building Industry Program	(12 UOC)

Year 4**Session One**

BLDG4501	Thesis Foundation	(6 UOC)
Electives		(18 UOC)

Session Two

BLDG4502	Thesis	(12 UOC)
Electives		(12 UOC)

Electives

Students' attention is drawn to the list of suggested electives below. These courses are offered specifically to meet the requirements for membership of professional bodies as defined below under the section 'Professional Recognition'.

Session 1 Electives

BENV2813	Construction Marketing	(3 UOC)
BENV2814	Property Law	(6 UOC)
BENV2815	Construction Management 4A	(6 UOC)
BENV2986	Property Management & Development	(6 UOC)
BLDG4285	Professional Practice & Procedure	(6 UOC)
BENV2718	Construction Technology 4	(3 UOC)
BLDG4305	Design Evaluation	(6 UOC)

Session 2 Electives

BENV2408	Building Information Systems	(6 UOC)
BENV2985	Land Economics & Valuation	(6 UOC)
BLDG4275	Dispute Avoidance & Resolution	(3 UOC)
BENV2816	Construction Organisational Behaviour	(6 UOC)
BLDG4304	Forecasting, Bidding & Cost Control	(6 UOC)
BENV2719	Housing Delivery Systems	(3 UOC)
BLDG4315	Business & Financial Control	(6 UOC)

Honours

The award of Honours is based on performance throughout the whole program, without requiring an additional Honours program. Honours are determined on the basis of a score which is calculated by weighting more heavily the courses taken in the later years of the program.

Academic Rules

1. The degree of Bachelor of Building Construction Management is awarded at either Pass or Honours level after the successful completion of a minimum of 204 units of credit.
2. To fulfil these requirements, students must complete:
 - 147 units of core courses, being all those prescribed in the faculty regulations for this program;
 - 12 units of work experience prior to entry into Year 4 as prescribed in the faculty regulations for this program;
 - 30 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment;
 - 12 units of General Education in accordance with University requirements.
3. The standard duration of the program is 4 years consisting of 8 semesters of full-time study (24 units of credit per semester) plus the required work experience.
4. General Education courses may not be taken before a student enters Year 2 of the program.

Work Experience

Prior to commencing their final year, all students are required to have gained a minimum of 80 days work experience by appropriate employment in the building industry. Notwithstanding the above, for registration with the Australian Institute of Quantity Surveyors or the Board of Quantity Surveyors Malaysia or the Royal Institution of Chartered Surveyors, students must undertake 6 months approved work experience to be completed before the start of the final year of the program.

A proposal for employment must be submitted to the Program Head for approval prior to starting work. Students will be required to produce documented evidence of their work experience. In order to complete this requirement, students must enrol in BLDG9999 Building Industry Program or in BLDG9998 Quantity Surveying Industry Program.

Progression

In the event of failure in one or more courses, students may carry the failed course(s) provided that:

- prerequisite courses have been completed to the satisfaction of the Program Head;
- the total number of courses taken at any time does not exceed 6 including General Education;

- the total contact hours do not exceed 20 per week.

Assumed Knowledge

Before entry to the Bachelor of Building Construction Management program it is recommended that students complete studies in at least HSC Mathematics.

Career Information

This program prepares students for professional and executive employment within one of Australia's largest industries, the construction industry. Careers in a wide variety of areas, in both private enterprise and in the public sector are available to building construction management graduates. More specifically, these include positions as project manager, master builder, construction consultant, building estimator, quantity surveyor, building economist, property manager and building scientist.

Professional Recognition

The award of the degree, Bachelor of Building Construction Management is recognised for admission to membership by:

1. The Australian Institute of Building
2. The Australian Institute of Quantity Surveyors, subject to completion of all compulsory courses and elective courses nominated by the Australian Institute of Quantity Surveyors plus BLDG9998 Quantity Surveying Industry Program
3. The Board of Quantity Surveyors Malaysia, subject to completion of all compulsory courses and elective courses nominated by the Board of Quantity Surveyors Malaysia plus BLDG9998 Quantity Surveying Industry Program
4. The Australian Property Institute, subject to the completion of the following electives in addition to all compulsory courses and selection of a thesis topic in the area of Land Economics.
5. The Royal Institution of Chartered Surveyors, subject to completion of all compulsory courses and elective courses nominated by RICS plus BLDG9998 - Quantity Surveying Industry Program.

The electives nominated by each of these accrediting bodies are listed on the FBE web site under the Building Construction Management program.

3360 Bachelor of Planning**BPlan****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Head: Susan Thompson

Program Description

The Bachelor of Planning program provides academic education and applied learning leading to professional qualifications in planning. The program is of four years full time duration with an additional mandatory year of work experience, normally taken after completing Session 1 of Year 3.

Planning has as its focus the management and development of urban and rural areas; ranging from small local precincts to metropolitan areas and regions. The planner's task is often to integrate and coordinate the aims and actions of a large number of government and private organisations and individuals to provide an equitable and efficient distribution of resources. Working at the interface of development and the environment, this involves collecting and analysing information; identifying needs and options; making forecasts; preparing policies, plans and programs for implementation; exercising development control; investigating development proposals; and evaluating results, communicating outcomes and consultation.

The Bachelor of Planning is also offered in combination with the Master of Environmental Management (PLANG23360). Please refer to the Bachelor of Planning Master of Environmental Management (BPlan MEM) entry under 'Combined Degree Programs'.

Program Objectives and Learning Outcomes

The objectives of the program are to create an awareness of the context in which planning operates, impart knowledge of how planning can influence the community and the physical environment, equip students with the competence to apply this knowledge at different levels in a wide range of situations, create an understanding of the contribution other disciplines can make to planning and vice versa, and develop skills in policy formulation, land use allocation and control, design and communication.

The program is structured to allow students to study a secondary specialisation in a particular area or to sample a wide range of educational experiences from across the University.

Program Structure

Year 1

Session One

PLAN1241	Planning Theory and Practice	(6 UOC)
PLAN1101	Understanding Design	(6 UOC)
PLAN1011	Urban Society	(6 UOC)
GEOS1701	Environmental Systems and Processes	(6 UOC)

Session Two

PLAN1122	Development Processes	(6 UOC)
PLAN1042	Local Planning	(6 UOC)
GEOH2801	Geographical Information Systems for Built Environment	(6 UOC)
Electives		(6 UOC)

Year 2

Session One

PLAN2111	Economics of Planning and Development	(6 UOC)
PLAN2032	Urban Design	(6 UOC)
PLAN2041	Integrated Planning 1	(6 UOC)
Electives		(6 UOC)

Session Two

PLAN2122	History, Heritage and the Built Environment	(6 UOC)
PLAN2152	Resources, Planning and the Natural Environment	(6 UOC)
PLAN1052	Quantitative Methods	(6 UOC)
General Education		(6 UOC)

Year 3

Session One

PLAN3031	Integrated Plan 2	(6 UOC)
PLAN3041	Planning Law & Administration	(6 UOC)
GEOH3671	Transport, Land Use and Environment	(6 UOC)
PLAN3051	Development Assessment	(6 UOC)

Session Two

PLAN0081	Work Experience	(24 UOC)

Year 4

Session One

PLAN0082	Work Experience	(24 UOC)

Session Two

PLAN3032	Integrated Plan 3	(6 UOC)
PLAN3015	Social Planning	(6 UOC)
PLAN3052	Qualitative Methods	(6 UOC)
Electives		(6 UOC)

Year 5

Session One

PLAN4031	Research Design	(3 UOC)
PLAN4121	Spatial Policy	(6 UOC)
Electives		(9 UOC)
General Education		(6 UOC)

Session Two

PLAN4132	Thesis Project	(12 UOC)
PLAN4142	Professionalism, Ethics and Politics	(6 UOC)
Electives		(6 UOC)

Program Minor

Students are strongly encouraged to use the elective courses to develop a specialisation in addition to their core planning studies.

Honours

Honours are awarded in the Bachelor of Planning degree on the basis of quality of performance throughout the whole program and in accordance

with current faculty policy. For the purpose of calculating Honours at graduation, the Honours value of each course is indicated by the units of credit associated with that course. Units of credit generally reflect the workload required of students in courses in which grades are awarded. Honours grades are Class 1, Class 2 Division 1, or Class 2 Division 2.

Academic Rules

1. The degree of Bachelor of Planning is awarded at either Pass or Honours level after the successful completion of a minimum of 240 units of credit.

2. To fulfil these requirements, students must complete:

- 147 units of core courses, being all those prescribed in the Faculty regulations for this program;
- 48 units of work experience normally undertaken in 2nd session of Year 3 and 1st session of Year 4 as prescribed in the Faculty regulations for this program;
- 33 units of open electives selected in accordance with the Faculty regulations for undergraduate study in the Faculty of the Built Environment;
- 12 units of General Education in accordance with University requirements.

3. The standard duration of the program is 5 years, consisting of 8 sessions of full-time study plus 2 sessions of required work experience, with each session worth 24 units of credit.

4. General Education courses may not be taken before a student enters Year 2 of the program.

Work Experience

During the program, students must undertake 48 weeks of approved employment related to the program. The program assists with placements in state government agencies, planning consultants, private firms, and local councils. This is normally undertaken in the twelve months following Session 1 of Year 3 as indicated in the Program Structure. Work experience requirements must be completed prior to graduation. The type of employment proposed must be submitted to the Program Head for approval.

Progression

Courses are to be taken in the year sequence listed above, except with the permission of the Head of the Planning and Urban Development Program.

Professional Recognition

The Bachelor of Planning Degree is recognised by the Planning Institute of Australia as an academic qualification for Corporate Membership after at least one additional year of practical experience following graduation. Corporate Membership of the Planning Institute of Australia confers reciprocal recognition in many countries.

3380 Bachelor of Landscape Architecture

BLArch

Typical Duration

4 years

Minimum UOC for Award

216 units of credit

Typical UOC per Session

24 units of credit

Program Head: Catherine Evans

Program Description

The Bachelor of Landscape Architecture program is of four years duration and requires full-time attendance throughout. Students are introduced to the theory and practice of landscape architecture through an exploration of design principles, graphic techniques, ecological processes and studies of human modification of the environment. As students progress through the program, increasing emphasis is laid upon creative design with particular application to Australian conditions. Projects are related to the subject matter of concurrent lectures and culminate in landscape studies of regional and national significance.

The majority of courses are taught specifically within the Landscape Architecture Program. However, contact with the students and staff of other programs is ensured by the inclusion of courses from other programs in the Faculty of the Built Environment, the University's General Education program and the program of elective courses. In the final two years of

the program students are able to undertake a significant component of elective courses from the Landscape Architecture Program, other programs within the Faculty or from other faculties, which effectively allows them to develop a major specialisation.

Program Objectives and Learning Outcomes

The program seeks the synthesis of knowledge and skills through project based learning in a sequence of eight Design Studios. Support courses are grouped into strands: environment, history and theory, communication, technology and practice.

Program Structure

Year 1

Session One

BENV1141	Computers and Information Technology	(3 UOC)
LAND1101	Design Fundamentals: Studio 1	(9 UOC)
LAND1121	Intro Landscape Architecture	(3 UOC)
GEOS1701	Environmental Syst. & Analysis	(6 UOC)
LAND1151	Horticulture	(3 UOC)

Session Two

LAND1152	Landscape Analysis	(9 UOC)
LAND1171	Landscape Technology 1	(3 UOC)
LAND1102	Land Design 2: Design Process	(6 UOC)
LAND1122	History of Landscape Arch.	(3 UOC)
LAND1142	Design Communication	(3 UOC)

Year 2

Session One

LAND1251	Advanced Horticulture	(3 UOC)
LAND1271	Landscape Technology 2	(3 UOC)
LAND1201	Landscape Design 3: Site Planning	(9 UOC)
LAND1221	Environmental Sociology for Landscape Architects	(3 UOC)

Session Two

LAND1272	Landscape Technology 3	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
LAND1202	Landscape Design 4: Landform and Planting Design	(9 UOC)
LAND1222	History and Theory Elective*	(3 UOC)
	General Education or electives	(6 UOC)

* See course description for LAND1222.

Additional Requirement

(completed before the start of Year 3)

LAND1381	Landscape Practice 1	(12 UOC)

Year 3

Session One

LAND1583	Professional Practice	(6 UOC)
LAND1351	Landscape Management	(3 UOC)
LAND1371	Landscape Engineering	(3 UOC)
LAND1301	Landscape Design 5	(9 UOC)
	General Education	(3 UOC)

Session Two

LAND1302	Land Design 6	(9 UOC)
LAND1321	Research Methods	(3 UOC)
	Electives	(12 UOC)

Additional Requirement

(completed before the start of Year 4)

LAND1481	Landscape Practice 2	(12 UOC)

Year 4

Session One

LAND1421	Landscape Thesis	(15 UOC)
or		
LAND1431	Advanced Research Project	(9 UOC)
and		
BENV2106	Landscape Design 9: Integrated Studio	(6 UOC)
	Electives	(9 UOC)

Session Two

LAND1401	Landscape Design 7: Urban Landscape Design	(12 UOC)
LAND1402	Landscape Design 8: Graduating Studio	(12 UOC)

Honours

The Bachelor of Landscape Architecture degree may be awarded with Honours based upon the quality of performance in the program and in

accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Academic Rules

1. The degree of Bachelor of Landscape Architecture is awarded at either Pass or Honours level after the successful completion of a minimum of 216 units of credit.

2. To fulfill these requirements, students must complete:

- 156 units of core courses, being all those prescribed in the faculty regulations for this program;
- 24 units of work experience prior to Year 4 as prescribed in the faculty regulations for this program;
- 24 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment;
- 12 units of General Education in accordance with University requirements.

3. The standard duration of the program is 4 years consisting of 8 semesters of full-time study (24 units of credit per semester) plus the required work experience.

4. General Education courses may not be taken before a student enters Year 2 of the Program.

5. Students who achieve a final mark above 65 in the prerequisite course, LAND1321 Research Methods, will be directed to the Landscape Thesis, and those who pass LAND1321 but whose final mark is 65 or less will be directed to the Advanced Research Project in Landscape Architecture. Students doing the Research Project will also be required to enrol in the co-requisite, Landscape Design 9: Integrated Studio.

6. A Progress Portfolio will be submitted at the end of second year as part of the assessment for LAND1202 and to determine progression into the third year of design. Similarly, another Progress Portfolio will be submitted at the end of third year which will determine progression into the final year of design.

7. Design Studios are considered to be a linear sequence, which requires that each design studio must be passed before a student can advance to the next level.

Work Experience

Students of the undergraduate program must obtain a total of 90 days work experience prior to graduation, of which a minimum of 40 days must be in landscape industry work and a minimum of 40 days in a landscape design office. This normally takes the form of employment during long student vacations supervised by a landscape architect, landscape contractor or nursery. Each student undertaking work experience must obtain prior approval of the Work Experience Coordinator.

Each student must obtain from the employer a statement of experience gained, maintain an accurate record in logbook form and submit a written report describing the work undertaken during the various work experience components. Details of these arrangements are available on the Faculty website.

Professional Recognition

The program is accredited by the Australian Institute of Landscape Architects and graduates holding the BLArch degree may qualify for corporate membership of the Institute.

3385 Bachelor of Industrial Design

BlndDes

Typical Duration

4 years

Minimum UOC for Award

204 units of credit

Typical UOC per Session

24 units of credit

Program Head: To be advised

Program Description

Industrial design involves the research and design of the whole range of consumer and capital products used by people. These are as diverse as telephones and transportation, kitchen appliances and exhibition systems. Ideally, the industrial designer works as part of a team involving engineering, production and marketing. The industrial designer initially concentrates on establishing the concept as a marketable, producible,

useable and socially responsible product; and subsequently details the human factors (ergonomics), appearance (style) and mode of operation. Frequently the designer becomes involved in the corporate image of companies and their products as well as the graphics of the product's packaging and the associated retail support systems.

The Bachelor of Industrial Design Program provides academic education and practical experience leading to professional qualifications in industrial design. It requires full time attendance for four years culminating in the Major Project.

Program Objectives and Learning Outcomes

There are two central goals. The primary goal is to equip students with the theoretical and practical knowledge, skills and techniques needed for the design, documentation and administration of design and product development. A more general goal is to provide students with an all-round general problem-solving education. Lectures and practical sessions cover theoretical knowledge in the following areas:

1. Industrial Design Studio
2. Visual Communication of Design (Computer aided and manual methods)
3. Marketing
4. Technology (Engineering materials and manufacture)
5. History and Theory

Program Structure

Year 1

Session One

IDES1101	Industrial Design Fundamentals	(6 UOC)
IDES1012	Safe Workshop Practices	(3 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
MATH1011	General Mathematics 1B	(6 UOC)
IDES1161	Industrial Design Communication A	(6 UOC)

Session Two

MATH2839	Statistics SM	(3 UOC)
IDES1031	Design Studio 1	(6 UOC)
IDES1121	History of Industrial Design	(3 UOC)
IDES1071	Materials and Technology Workshop A	(6 UOC)
IDES1162	Industrial Design Communication B	(6 UOC)

Year 2

Session One

IDES2072	Materials and Technology Workshop B	(6 UOC)
IDES2163	Industrial Design Communication C	(6 UOC)
IDES2201	Ergonomics	(6 UOC)
IDES2161	Industrial Design Studio 2A	(6 UOC)

Session Two

IDES2162	Industrial Design Studio 2B	(6 UOC)
IDES2171	Computer Applications in Industrial Design	(6 UOC)
IDES2092	Industrial Design Theory and Process	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)

Year 3

Session One

IDES3073	Materials and Technology Workshop C	(6 UOC)
MARK2051	Consumer Behaviour	(6 UOC)
MARK2052	Marketing Research	(6 UOC)
IDES3221	Industrial Design Studio 3A	(6 UOC)

Session Two

IDES3222	Industrial Design Studio 3B	(6 UOC)
Electives		(12 UOC)
General Education		(6 UOC)

Year 4

Session One

IDES4291	Industrial Design Studio 4	(6 UOC)
IDES4301	Project Research	(6 UOC)
IDES4372	Industrial Design Management and Practice	(6 UOC)
Electives		(6 UOC)

Session Two

IDES4352	Industrial Design Project	(12 UOC)
Electives		(6 UOC)
General Education		(6 UOC)

Honours

The Bachelor of Industrial Design degree may be awarded with Honours based upon the quality of performance in the program, and in accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Academic Rules

1. The degree of Bachelor of Industrial Design is awarded at either Pass or Honours level after the successful completion of a minimum of 192 units of credit.

2. To fulfil these requirements, students must complete:

- 156 units of core courses, being all those prescribed in the faculty regulations for this program.
- 24 units of open electives, selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment.
- 12 units of General Education in accordance with University requirements.

3. The standard duration of the program is 4 years consisting of 8 semesters of full-time study (24 units of credit per semester).

4. General Education courses may not be taken before a student enters Year 2 of the program.

Career Information

The program prepares students for professional and executive employment in areas involving the research, design and development of new manufactured products. Whilst it is anticipated that most graduates will be initially employed in an industrial design capacity either in manufacturing companies or consultancies, it is likely that some graduates may subsequently choose to specialise in aspects of marketing, engineering, product management or design management.

Professional Recognition

The Degree of Bachelor of Industrial Design from the University of New South Wales is recognised by the Design Institute of Australia.

Combined Degree Programs

3262 Bachelor of Architecture Bachelor of Arts

BArch BA

Typical Duration

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Head: To be advised

Program Description

The BArch BA program is administered by the Architecture Program in the Faculty of the Built Environment. The program requires students to obtain the approval of the Faculty of Arts and Social Sciences for the BA components of their program. The final program and timetable must be approved by the Architecture Program Head in the Faculty of the Built Environment.

The program is open to all students who satisfy both the Architecture and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the Architecture program after the completion of at least one year if they have a credit or higher average or the permission of the Architecture Program Head. Transfer after the second year may result in the student taking more than minimum time to complete the combined degree.

Students should start discussing their program with representatives of the Architecture Program and the Faculty of Arts and Social Sciences as early as possible. Students should themselves determine the Arts program that they wish to undertake. The Arts and Social Sciences section in this Handbook describes the options. There are rules that prescribe what may be taken in each year and students should be aware of the Architecture requirements prior to choosing Arts preferences.

Students will also need to refer to the Faculty of Arts and Social Sciences section in this Handbook for complete program and course details.

Program Objectives and Learning Outcomes

This combined degree allows students to add their choice of an Arts program to the standard, professionally accredited Architecture program offered by the Faculty of the Built Environment. It provides flexibility in the choice of courses with the full Arts program and enables students to gain a broad education in Arts as well as the specialised studies of Architecture. Since both the Architecture and Arts programs can have common subject areas, and the Architecture program contains a percentage of open electives, the combined program requires only one additional session of study on top of the standard BArch program to gain the additional qualification of Bachelor of Arts. In general, the BA courses are taken concurrently with the BArch program so that both can be completed in eleven sessions.

The award of this combined degree demands an amalgamation of the conditions governing both the BArch degree and the BA degree with changes to the requirements for participation in General Education programs and total units of credit.

Program Structure

Year 1

Session One

ARCH1171	Architectural Technologies 1	(9 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
ARCH1121	Architectural History and Theory 1	(4 UOC)
BENV1101	Design Fundamentals: Studio 1	(8 UOC)

Session Two

ARCH1172	Architectural Technologies 2	(8 UOC)
ARCH1102	Architectural Design Workshop 1	(8 UOC)
ARCH1122	Architectural History and Theory 2	(4 UOC)
ARCH1142	Communications 1	(4 UOC)

Year 2

Session One

ARCH1271	Architectural Technologies 3	(6 UOC)
ARCH1201	Architectural Design Workshop 2	(8 UOC)
ARCH1221	Architectural History and Theory 3	(4 UOC)
ARCH1241	Communications 2	(3 UOC)
FBE Elective		(3 UOC)

Session Two

ARCH1272	Architectural Technologies 4	(4 UOC)
ARCH1202	Architectural Design Workshop 3	(8 UOC)
ARCH1282	Research Practice	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
ARCH1222	Architectural History and Theory 4	(3 UOC)
FBE Elective		(3 UOC)

Year 3

Session One

ARCH1371	Architectural Technologies 5	(4 UOC)
ARCH1301	Architectural Design Studio 1	(8 UOC)
BENV1341	Design Modelling and Visualisation	(3 UOC)
ARCH1321	Architectural History and Theory 5	(3 UOC)
BA Courses		(6 UOC)

Session Two

ARCH1302	Architectural Design Studio 2	(9 UOC)
ARCH1382	Practicum	(3 UOC)
BA Courses		(12 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Year 4

Session One

ARCH1401	Architectural Design Studio 3	(9 UOC)
BA Courses		(12 UOC)
FBE Elective		(3 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head

Session Two

ARCH1470	Building Services 1 & 2	(6 UOC)
ARCH1381	Professional Practice 1	(3 UOC)
ARCH1402	Architectural Design Studio 4	(9 UOC)
BA Courses		(6 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head

Additional Requirement

(After Year 1 and before Year 5)

ARCH1583	Work Experience	(24 UOC)

Year 5

Session One

ARCH1501	Investigation Workshop	(9 UOC)
ARCH1582	Professional Practice 2	(6 UOC)
BA Courses		(6 UOC)
FBE Elective		(3 UOC)

Session Two

ARCH1502	Graduation Project	(9 UOC)
BA Courses		(12 UOC)
FBE Elective		(3 UOC)

Year 6

Session One

BA Courses	(24 UOC)

Honours

Students may be awarded a BA (Honours) degree through successfully completing an Honours year.

It should be noted that entry into a particular BA (Honours) program may require completion of courses additional to those specified in the Degree Rules and Faculty Regulations. The Honours year would be outside the suggested time for the combined degree.

The Bachelor of Architecture degree may be awarded with Honours based on the quality of performance in the program and in accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

In order to be considered for the University Medal, students must have completed at least 3 years of study towards their BArch degree at UNSW. Where appropriate, BArch (Honours) is conferred at graduation for the combined degree unless students carry out the additional BA Honours program.

Academic Rules

1. The degrees of Bachelor of Architecture and Bachelor of Arts are awarded at either Pass or Honours level (BArch only) after successful completion of a minimum of 210 units of credit from the Architecture Program and 78 units of credit from the Arts Program. The combined total units of credit is 288. To gain Honours in Arts, students are required to carry out an extra year of study (48 units of credit) with a Major in an approved area.

2. To fulfil these requirements, students must complete:

- 171 units of core courses in Architecture, being all those prescribed in the in the faculty regulations for this program.
- 24 units of work experience completed after Year 1 and before Year 5 as prescribed in the faculty regulations for this program.
- 15 units of FBE electives in the Faculty of the Built Environment, selected in accordance with the faculty regulations for this program.
- 78 units of credit from the range of Arts majors in accordance with the Faculty of Arts and Social Science Rules. Students in the combined degree should undertake no more than 24 units of credit in Level 1 courses.

3. The standard duration of the program is 6 years consisting of 11 semesters of full-time study (24 units of credit per semester) plus 1 semester of required work experience.

4. Arts courses may not be taken until after the student has completed 96 units of credit points from the BArch program.

5. To fulfil the requirements of the BA component of the program, students must undertake a major by completing 42 units of credit in one of the approved disciplinary streams identified in the faculty regulations for this program.

Faculty Regulations for the BArch BA

Core Courses in Architecture

The core courses prescribed for the program are all those named in Program Structure above.

FBE Electives

Faculty of the Built Environment (FBE) electives must be selected from those offered by the FBE.

Arts Major

For the Arts Majors and course selection restriction, please see the Faculty of Arts and Social Sciences.

Course Selection Restrictions

No course included for credit in the BArch program can be included in the 78 units of credit required in Rule 1 for the BA program.

Work Experience/Composite Courses/Progression rules

Please see the BArch (program code 3260) for work experience regulations.

Professional Recognition

Please refer to the BArch (program code 3260) professional recognition section for complete details.

3263 Bachelor of Architecture Bachelor of Social Science

BArch BSocSc**Typical Duration**

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Head: To be advised

Program Description

The BArch BSocSc program is administered by the Architecture Program of the Faculty of the Built Environment. The program requires the student to obtain approval of the Faculty of Arts and Social Sciences for the BSocSc components of their program. The final program and timetable must be approved by the Architecture Program Head in the Faculty of the Built Environment.

Students should start discussing their program with representatives of the Architecture Program and the Faculty of Arts and Social Sciences as early as possible. Students should themselves determine the Social Science Major that they wish to undertake. The Faculty of Arts and Social Science section in this Handbook describes the options available and students will need to refer to this section for complete program and course details. There are rules that prescribe what may be taken in each year and students should be aware of the Architecture requirements prior to choosing Social Science preferences.

Program Objectives and Learning Outcomes

This combined degree allows students to add their choice of a Social Science program to the standard, professionally accredited Architecture program offered by the Faculty of the Built Environment. It provides flexibility in the choice of courses with the full Social Science program and enables students to gain a broad education in Social Science as well as the specialised studies of Architecture. Because Architecture and Social Science programs can have common subject areas, and the Architecture program contains a percentage of open electives, the program requires only one additional session of study to gain the additional qualification of Bachelor of Social Science. In general, the BSocSc courses are taken concurrently with the BArch program so that both can be completed in eleven sessions.

The award of this combined degree demands an amalgamation of the conditions governing both the BArch degree and the BSocSc degree with changes to the requirements for participation in General Education programs and total units of credit.

Program Structure**Year 1****Session One**

ARCH1171	Architectural Technologies 1	(9 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
ARCH1121	Architectural History and Theory 1	(4 UOC)
BENV1101	Design Fundamentals: Studio 1	(8 UOC)

Session Two

ARCH1172	Architectural Technologies 2	(8 UOC)
ARCH1102	Architectural Design Workshop 1	(8 UOC)
ARCH1122	Architectural History and Theory 2	(4 UOC)
ARCH1142	Communications 1	(4 UOC)

Year 2**Session One**

ARCH1271	Architectural Technologies 3	(6 UOC)
ARCH1201	Architectural Design Workshop 2	(8 UOC)
ARCH1221	Architectural History and Theory 3	(4 UOC)
ARCH1241	Communications 2	(3 UOC)
FBE elective		(3 UOC)

Session Two

ARCH1272	Architectural Technologies 4	(4 UOC)
ARCH1202	Architectural Design Workshop 3	(8 UOC)
ARCH1282	Research Practice	(3 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
ARCH1222	Architectural History and Theory 4	(3 UOC)
FBE elective		(3 UOC)

Year 3**Session One**

ARCH1371	Architectural Technologies 5	(4 UOC)
ARCH1301	Architectural Design Studio 1	(8 UOC)
BENV1341	Design Modelling and Visualisation	(3 UOC)
ARCH1321	Architectural History and Theory 5	(3 UOC)
BSocSc courses		(6 UOC)

Session Two

ARCH1302	Architectural Design Studio 2	(9 UOC)
ARCH1382	Practicum	(3 UOC)
BSocSc courses		(12 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Year 4**Session One**

ARCH1401	Architectural Design Studio 3	(9 UOC)
BSocSc Courses		(12 UOC)
FBE Elective		(3 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head.

Session Two

ARCH1470	Building Services 1 & 2	(6 UOC)
ARCH1381	Professional Practice 1	(3 UOC)
ARCH1402	Architectural Design Studio 4	(9 UOC)
BSocSc Courses		(6 UOC)

Opportunity for alternate off-campus Exchange Program with the approval of the Program Head

Additional Requirement

(After Year 1 and before Year 5)

ARCH1583	Work Experience	(24 UOC)

Year 5**Session One**

ARCH1501	Investigation Workshop	(9 UOC)
ARCH1582	Professional Practice 2	(6 UOC)
BSocSc Courses		(6 UOC)
FBE Elective		(3 UOC)

Session Two

ARCH1502	Graduation Project	(9 UOC)
BSocSc Courses		(12 UOC)
FBE Elective		(3 UOC)

Year 6**Session One**

BSocSc Courses		(24 UOC)

Honours

Students may be awarded Honours in the BSocSc degree by successful completion of an Honours year. It should be noted that entry into a particular BSocSc Honours program may require completion of courses additional to those specified in the Degree Rules and Faculty Regulations. The Honours year would be outside the suggested time for the combined degree.

The Bachelor of Architecture degree may be awarded with Honours based on the quality of performance in the program and in accordance with current program policy. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2. In order to be considered for the University Medal, students must have completed at least 3 years of study towards their BArch degree at the University of New South Wales.

Where appropriate, BArch Honours is conferred at graduation for the combined degree unless students carry out the additional BSocSc Honours program.

Academic Rules

1. The degrees of Bachelor of Architecture and Bachelor of Social Science are awarded at either Pass or Honours level (BArch only) after successful completion of a minimum of 210 units of credit from the Architecture Program and 78 units of credit from the Social Science Program. The combined total units of credit is 288. To gain Honours in Social Science students are required to carry out an extra year of study (48 units of credit) with a Major in an approved area.

2. To fulfil these requirements, students must complete:

- 171 units of core courses in Architecture, being all those prescribed in the faculty regulations for this program.
- 24 units of work experience completed after Year 1 and before Year 5 as prescribed in the faculty regulations for this program.
- 15 units of FBE electives in the Faculty of the Built Environment, selected in accordance with faculty regulations for this program.
- 78 units of credit from the Social Science Policy core and a major in accordance with Faculty of the Arts and Social Sciences Rules. Students in the combined degree should undertake no more than 24 units of credit in Level 1 courses.

3. The standard duration of the program is 6 years consisting of 11 semesters of full-time study (24 units of credit per semester) plus 1 semester of required work experience.

4. Social Science courses may not be taken until after the student has completed 96 units of credit points from the BArch program.

5. To fulfil the requirements of the BSocSc component of the program, students must complete a Social Science and Policy core and a major (30 units of credit) in one of the approved disciplinary streams identified in the faculty regulations for this program.

Faculty Regulations for the BArch BA

Core Courses in Architecture

The core courses prescribed for the program are all those named in the above program structure.

FBE Electives

Faculty of the Built Environment (FBE) electives must be selected from those offered by the FBE.

Social Science Major

For Social Science majors please see the Faculty of Arts and Social Sciences section in this Handbook.

Course Selection Restrictions

No course included for credit in the BArch program can be included in the 78 units of credit required in Rule 1 for the BSocSc program.

Work Experience

Please see BArch (program code 3260) for work experience regulations.

Professional Recognition

Please refer to the BArch (program code 3260) professional recognition section for complete details.

4705 Bachelor of Architecture Bachelor of Laws

BArch LLB

This program provides an opportunity to obtain two professional degrees. It allows students to add the professionally recognised Law program to the professionally accredited Architecture program offered by the Faculty of the Built Environment. The Law courses, while fewer in number than the Jurisprudence/Law program, satisfy the requirements for the award of the professional LLB degree. Because the Architecture program contains a percentage of open electives which can be replaced by Law courses, the combined program requires only three additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BArch program and both can be completed in thirteen sessions, although students are considered to have a significant workload throughout these thirteen sessions.

For full details of this program, please refer to the Faculty of Law section of this Handbook.

4707 Bachelor of Planning Bachelor of Arts

BPlan LLB

This program provides an opportunity to obtain two professional degrees. It allows students to add the professionally recognised Law program to the professionally accredited Planning program offered by the Faculty of the Built Environment. The Law courses satisfy the requirements for the award of the professional LLB degree. Because the Planning program contains a percentage of open electives that can be replaced by Law courses, the combined program requires only four additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BPlan program and both can be completed in a minimum of seven years, consisting of twelve academic sessions (six years), plus two sessions of compulsory work experience. This compares with the five year BPlan program, which consists of eight academic sessions and two sessions (12 months) of compulsory work experience.

For full details of this program, please refer to the Faculty of Law section of this Handbook.

3360 Bachelor of Planning Master of Environmental Management

BPlan MEM – Plan PLANG23360

Program Head: Susan Thompson

This program provides an opportunity to obtain two professional degrees. It allows students to add the Masters in Environmental Management program offered by the Institute of Environmental Studies to the professionally accredited Bachelor of Planning program offered by the Faculty of the Built Environment. Because the Planning program contains a percentage of open electives which can be replaced by MEM courses, the linked program requires only two additional sessions of study to gain both qualifications. Both degrees can be completed in a minimum of twelve sessions. As an alternative, the final 48 units of credit in the MEM program may also be taken part-time or by distance learning.

Students may transfer to this program following three years of study in the Bachelor of Planning program having achieved a weighted average of 65 or higher in all graded courses undertaken.

Students in the BPlan MEM program will not be eligible for the award of the Graduate Certificate in Environmental Management nor the Graduate Diploma in Environmental Management.

The BPlan MEM program is administered by both the Faculty of the Built Environment (Years 1–5) and the Institute of Environmental Studies (Year 6). The final program and timetable for Years 1–5 must be approved by the Head of the Planning and Urban Development Program in the Faculty of the Built Environment and for Year 6 by the Director of the Institute for Environmental Studies.

Registration/Professional Recognition

Please refer to the BPlan professional recognition section for complete details.

Plan Structure – PLANG23360

Year 1

Session One

PLAN1241	Planning Theory and Practice	(6 UOC)
PLAN1101	Understanding Design	(6 UOC)
PLAN1011	Urban Society	(6 UOC)
GEOS1701	Environmental Systems and Process	(6 UOC)
Total		24 UOC

Session Two

PLAN1042	Local Planning	(6 UOC)
PLAN1122	Development Processes	(6 UOC)
PLAN1052	Quantitative Methods	(6 UOC)
GEOH2801	Geographical Information Systems for Built Environment	(6 UOC)
Total		24 UOC

Year 2

Session One

PLAN2041	Integrated Planning 1 – Communication in Planning	(6 UOC)
PLAN2032	Urban Design	(6 UOC)
PLAN2111	Economics of Planning and Development Electives	(6 UOC)
	General Education	(3 UOC)
Total		24 UOC

Session Two

PLAN2152	Resources, Planning and the Natural Environment	(6 UOC)
PLAN2122	History, Heritage and the Built Environment	(6 UOC)
	Electives	(6 UOC)
	General Education	(6 UOC)
Total		24 UOC

Year 3**Session One**

PLAN3031	Integrated Planning 2 – Strategic Planning	(6 UOC)
PLAN3041	Planning Law and Administration	(6 UOC)
PLAN3051	Development Assessment	(6 UOC)
GEOH3671	Transport, Land Use and Environment	(6 UOC)
Total		24 UOC

Session Two

PLAN0081	Work Experience	24 UOC

Year 4**Session One**

PLAN0082	Work Experience	24 UOC

Session Two

PLAN3032	Integrated Planning 3 – Master Planning	(6 UOC)
PLAN3015	Social Planning	(6 UOC)
PLAN3052	Qualitative Methods	(6 UOC)
UEST5001	Frameworks for Environmental Management	(6 UOC)
Total		24 UOC

Year 5**Session One**

PLAN4121	Spatial Policy	(6 UOC)
PLAN4031	Research Design	(3 UOC)
CVEN9895	Fundamental Knowledge in Environmental Management: Engineering	(6 UOC)
BIOS9001	Fundamental Knowledge in Environmental Management: Ecology*	(6 UOC)
	General Education	(3 UOC)
Total		24 UOC

Session Two

PLAN4132	Thesis Project	(12 UOC)
PLAN4142	Professionalism, Ethics and Politics	(6 UOC)
CHEM7300	Fundamental Knowledge in Environmental Management: Physical Science	(6 UOC)
Total		24 UOC

Year 6**Session One**

UEST5002	Tools for Environmental Management	(6 UOC)
ECON5125	Fundamental Knowledge in Environmental Management: Economics	(6 UOC)
	MEM Electives**	(12 UOC)
Total		24 UOC

Session Two

UEST5003	Addressing Environmental Issues	(6 UOC)
	MEM Electives**	(18 UOC)
Total		24 UOC

*BIOS9001 *Fundamental Knowledge in Environmental Management: Ecology* is undertaken as a Summer Session course between Years 4 and 5.

**Students cannot undertake MEM elective courses which have course identifier prefixes of BENV or UDES offered by the Faculty of the Built Environment.

Note that Sessions 1 and 2 of Year 6 may also be undertaken part-time or by distance learning.

Plan Award Rules

1. The degree of Bachelor of Planning will be awarded at either Pass or Honours level after the successful completion of a minimum of 240 units of credit including 24 units of credit from the MEM program. The degree of Master of Environmental Management will be awarded at Pass level after the successful completion of 72 units of credit from the MEM

program, 24 of which are carried out during the final two years of the BPlan program.

2. To fulfill these requirements, students must complete:

- 147 units of core courses in Planning, being all those prescribed in the faculty regulations for this program.
- 48 units of work experience as prescribed in the faculty regulations for this program.
- 9 units of open electives selected in accordance with the faculty regulations for undergraduate study in the Faculty of the Built Environment.
- 42 units of core courses in Environmental Management, being all those prescribed in the regulations for the MEM program.
- 12 units of General Education in accordance with University requirements.
- 30 units of program electives in Environmental Management selected in accordance with the regulations for the MEM program.

3. The standard duration of the program is 5 years consisting of 10 semesters of full-time study (24 units of credit per semester) plus 1 year of required work experience.

4. The student must complete 144 units of credit in the Bachelor of Planning program before attempting any courses from the MEM program.

Faculty Regulations for the BPlan MEM**Core Courses in Planning**

The core courses prescribed for the BPlan program are all those named in Plan Schedule up to and including the end of Year 5 and excluding the four courses named in MEM Core Courses.

Transfer Arrangements

Students may transfer to this program following the successful completion of at least 144 units of credit in the Bachelor of Planning program provided they have achieved a weighted average mark across all graded courses of 65 or higher.

Students in the BPlan MEM program may transfer back to the BPlan program. They will receive credit toward their BPlan degree of up to 24 units of credit for MEM courses completed while undertaking the program. Students in the BPlan MEM program who do not complete the BPlan degree including 24 units of credit of MEM courses cannot transfer directly to the MEM program, but may subsequently apply for admission to the MEM upon completion of the BPlan and may request credit for MEM courses completed while they were undertaking the joint program.

Course Selection Restrictions

During the final three sessions of the BPlan program students must complete the four MEM courses listed in MEM Core Courses table.

MEM Core Courses

UEST5001	Frameworks for Environmental Management
CVEN9895	Fundamental Knowledge in Environmental Management: Engineering
BIOS9001	Fundamental Knowledge in Environmental Management: Ecology
CHEM7300	Fundamental Knowledge in Environmental Management: Physical Science

Honours

The Bachelor of Planning degree may be awarded with Honours based on the quality of performance in the program of study undertaken to fulfill the requirements of that degree, and in accordance with current faculty regulations. Honours are Class 1 or Class 2 Division 1 or Class 2 Division 2.

Work Experience

During the degree, students must undertake 48 weeks of approved planning-related employment. The Planning and Urban Development Program assists with placements in state government agencies, planning consultants, private firms, and local councils. This is normally undertaken in the twelve months following Session 1 of Year 3 as indicated in the Program Schedule. Work experience requirements must be completed prior to graduation. The type of employment proposed must be submitted to the Head of the Planning and Urban Development Program for approval.

Faculty of the College of Fine Arts

A Message from the Dean

The College of Fine Arts is one of the ten dynamic faculties of the University of New South Wales. Studying at COFA is characterised by rigorous studio activities, high levels of scholarship and research, exposure to the best and most exciting art and design practice Sydney can offer, and participation in collaborative international art projects. Located in Paddington, the centre of Sydney's gallery and museum district, COFA offers a comprehensive range of undergraduate, postgraduate and research degrees through its five professional schools (School of Art, School of Art Education, School of Art History and Theory, School of Design Studies and School of Media Arts). The College is unique amongst Australian art and design institutions in that it provides studio practice as well as professional studies in theory, history, education and management.

Staff and students at the College are engaged in scholarship and research across a wide range of visual arts and design disciplines including painting, drawing, printmaking, sculpture/performance/installation, photography, film/video, mixed media, digital media, ceramics, textiles, jewellery, graphics/media, applied/object and environments/spatial. Specialist degrees are offered in the areas of art education, design education, art and design history and theory, and arts administration. Cross-disciplinary courses that link COFA and other UNSW teaching and research expertise are also available, combining, for example, arts administration with law or commerce.

The teaching and research of both studio and theoretical activities is based on three principles. Firstly, the increased cross-disciplinary nature of the visual arts and design is recognised. Secondly, the acquisition of traditional skills and the application of new technologies (often regarded as mutually exclusive) are integral to all aspects of teaching and learning. Thirdly, students are offered a college and a wider university experience that enhances their capacity to respond in a significant way to the personal, artistic, cultural and political issues of our time.

COFA has a commitment to the international engagement of its students, staff, curriculum and research activities. Within an overall enrolment of approximately 2200, 210 are international students who come from more than 25 countries across Asia and the Pacific, Europe and the Americas. The College has cooperative agreements with specialist art and design institutions throughout the world. For example, the International Drawing Research Institute (located at the College) places COFA staff and students in key learning roles alongside colleagues in Beijing and Glasgow.

COFA has the expertise, resources and experience to offer specialised yet flexible cross-disciplinary degree programs in visual arts and design. The extensive holdings of the Clement Semmler Library, the vibrant and challenging exhibition programs of the COFA student gallery and internationally renowned Ivan Dougherty Gallery, the excellent materials handling and fabrication workshops, A/V support and computer facilities that are essential learning and research tools within art and design make a major contribution to the student experience at COFA. The research activities of students and staff are supported by individual staff and student initiatives, specialist conferences, centres and institutes.

It gives me great pleasure to welcome you into the community of artists, designers, theorists and educators that make up the Faculty of the College of Fine Arts, UNSW.

Professor Ian Howard
Dean
College of Fine Arts

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Faculty Information and Assistance

The College of Fine Arts

Research and scholarship in the disciplines of art and design is organised and administered through five schools. Undergraduate degree programs allow specialised studies, combined and interdisciplinary student plans. The College includes the Clement Semmler Library, a specialist art and design research library; the Ivan Dougherty Gallery, the COFA Exhibition/Performance Spaces, and Three Foot Square; and three research centres: the International Drawing Research Institute, the iCINEMA Centre for Interactive Cinema Research and the Centre for Contemporary Art and Politics.

Who Can Help?

If you require advice about enrolment, degree requirements, progression within programs or any other general matters, contact the Student Centre, ground floor, B Block, phone (02) 9385 0684.

Faculty timetables and official University forms are also available from the Student Centre.

The location of the College of Fine Arts is:

Cnr. Oxford Street and Greens Road
Paddington NSW 2021 Australia

All enquiries should be addressed to:

The Student Centre
College of Fine Arts,
The University of New South Wales
PO Box 259
Paddington NSW 2021
Tel: (02) 9385 0684
Fax: (02) 9385 0706
email: cofa@unsw.edu.au

The College of Fine Arts Website

Please refer to the College of Fine Arts' website for further information:
www.cofa.unsw.edu.au

The School of Art

Web address: www.cofa.unsw.edu.au/art

The School of Art Education

Web address: www.cofa.unsw.edu.au/arted

The School of Art History and Theory

Web address: www.cofa.unsw.edu.au/arhtht

The School of Design Studies

Web address: www.cofa.unsw.edu.au/design

The School of Media Arts

Web address: www.cofa.unsw.edu.au/media

COFA Online

Web address: www.cofa.unsw.edu.au/online

Course Descriptions

Course descriptions for 2006 can be found in alphabetical order by course code at the back of this Handbook. Many non-core courses are offered on a rotating two or three year schedule, and the full list is available in the Online Handbook at **www.handbook.unsw.edu.au**

Units of Credit

The University has introduced a university-wide units of credit system for all courses offered to both undergraduate and postgraduate students. The system means that a course will have the same units of credit value irrespective of which faculty's program it is counting towards. Students are able to determine the value of courses taken from other faculties when planning their programs of study. The student load for a course is calculated by dividing the units of credit value of a course by the total units of credit required for that year of the program. Student load is used to determine both student contribution charges and tuition fees. Students who take more or less than the standard load for that year of a program will be charged accordingly.

Prerequisite and Corequisite Requirements

A student enrolling in a course must satisfy the prerequisite and corequisite requirements for that course.

General Education Requirements

The objectives of General Education and details of the courses offered across the University are available at the front of this Handbook. Please contact the College of Fine Arts for further information regarding the Faculty's rules and regulations on General Education.

The following courses are not available as General Education for students in the following degrees:

Bachelor of Art Education

Bachelor of Design Bachelor of Art Education

GENB4001	Psychology of the Individual and the Group
GENT1502	Student Learning, Thinking and Problem Solving
GENT1503	Introduction to Educational Psychology
GENT1504	Ethics and Education
GENT1506	Social Foundations of Education
GENT1507	Learning Process and Instructional Procedures

Applicants for exemption from General Education courses on the basis of prior studies, must complete the Application Form for General Education Exemption and submit it to the Associate Dean, Academic at the College of Fine Arts at the time of enrolment at COFA. Students may apply for approval to substitute any course(s) from other faculties for General Education courses up to a total maximum of 6 units of credit (or 50%) of General Education. Applicants for substitution must complete the Application Form for General Education Substitution and submit it to the Associate Dean, Academic. Application forms are available from the Student Centre or the office of the Associate Dean, Academic.

Advanced Standing

Credit can be gained for relevant equivalent courses completed at another recognised institution within the previous ten years. The maximum advanced standing available is 50% of the program.

Attendance

Except where leave is granted:

- students must attend and participate in all classes for courses in which they are enrolled;
- where absences in excess of 3 classes occur, students may be given a fail grade (UF).

Computing Information

For general details of computing services, see 'General University Rules and Student Information' in this Handbook.

Computing resources at the College include 4 main teaching labs, a general access lab, smaller specialist labs, specialist audio and video studios, workstations and control rooms. In total, COFA provides over 150 general and specialist workstations equipped with hardware and software complementary to course requirements. All workstations are connected to the University Wide Network, which in turn is connected to the Internet via the ARNet2 network.

The General Access Laboratory provides COFA students with word processing, email, Internet access and basic imaging needs including OCR and image scanning. The teaching labs provide access to multimedia, web authoring, DVD authoring, modelling, animation, CAD, desktop publishing and high end scanning. The Digital Studio and Moving Image Labs provide access to digital audio and video production. Decks patched into these workstations include DAT, VHS, Mini DV and DVCAM. The Research Imaging Laboratory includes a number of computers with a range of 2D and 3D digital imaging applications.

In addition to the College computing facilities, COFA also encourages students to consider the purchase of a personal computer as recommended by UNSW Division of Information Services (DIS) to support their studies. The COFA Computing Resource Handbook detailing further information on purchasing a computer, computing policy, facilities and services can be found at **www.cofa.unsw.edu.au/units/csu**

Advice is available from school offices on the requirements for computing equipment and software for each program offered. Students undertaking computing studies in any program are responsible for ensuring that they have appropriate backups of their work. Work should not be left on College computers as its security cannot be guaranteed by the College. All students enrolled in courses at the College are bound by the COFA Computing Code of Conduct for Students, which can be found at **www.cofa.unsw.edu.au/units/csu/studentinfo/**

Technical Resources

The Resource Centre provides audio-visual services to the Faculty in the form of equipment and expertise. The Centre has a wide range of equipment, including DAT recorders, mini DV cameras, digital still cameras, and portable data projectors. For more information, see www.cofa.unsw.edu.au/units/resource/

A range of video and audio editing equipment and studios is also available at the College. Other services at the College include Digital Print and Copy Service (DP&CS) which provides various output services to the students and staff of COFA, UNSW and external clients. Services include: large format printing on a range of media; digital to colour copier; photographic continuous tone; CD burning; digital to film and high quality film scanning.

Clement Semmler Library

The Clement Semmler Library supports teaching, learning and research in art and design at the College of Fine Arts. For information regarding resources and opening hours, please refer to the website at <http://info.library.unsw.edu.au/cofa/about/cofa.html>

Ivan Dougherty Gallery

UNSW Ivan Dougherty Gallery provides an educational and cultural resource for the University, the broader national and international art community and the general public. The Gallery presents around ten to twelve group or thematic exhibitions per year of Australian and international recent and contemporary art in all media and disciplines: painting, sculpture, prints, drawings, design and installation work. There is a faculty and postgraduate exhibition held each year.

Public programs such as forums, symposia and floor talks accompany exhibitions. These are attended by UNSW students and the general public. In addition, a publication is produced for each exhibition, generally in the form of an illustrated catalogue containing curatorial essays, artist texts and background information. The Gallery keeps a research archive of all published material and photographic images of each exhibition.

Ivan Dougherty Gallery was established in 1977 by the Alexander Mackie College of Advanced Education at 200 Cumberland Street, The Rocks and was named after Major General Sir Ivan Dougherty, Chairman of the first College Council. It moved to its current premises in 1981.

UNSW Ivan Dougherty Gallery hours: Monday to Saturday 10am – 5pm (closed public holidays).

Website: www.cofa.unsw.edu.au/idg

UNSW College of Fine Arts also houses the COFA Exhibition and Performance Space (COFA Gallery), primarily for the benefit of student work. It oversees a dynamic program of week-long exhibitions featuring the work of COFA students, students from international art institutions, recurrent events such as ARTEXPRESS and various student award exhibitions.

COFA Gallery hours: Monday to Friday 10am – 5pm (closed public holidays).

Support for Students

The Counselling Service, Compass Programs, provides personal development resources, enhancement programs and confidential counselling to enrolled students of UNSW. Students are encouraged to access the Counselling Service in relation to any issue that might adversely affect their personal and academic progress. The service employs psychologists who are able to assist students with concerns such as: transition and adjustment to university life and academic expectations; support with sorting out academic or administrative issues; motivation and other difficulties which affect study; interpersonal problems or relationship conflicts; and personal concerns such as stress, anxiety, depression or loneliness.

Appointments at the College of Fine Arts can be made by telephoning (02) 9385 0733 or visiting the COFA service at ground floor, G Block, Room 05. Appointments on the Kensington campus are available between 9am and 5pm and can be made by dropping in or telephoning (02) 9385 5418 for the Counselling Service which is located on the 2nd Floor, East Wing, Quadrangle Building. Telephone counselling appointments and before/after hours appointments can be negotiated.

The Counselling Service website contains an introduction to the service and useful resources for students and staff: www.counselling.unsw.edu.au

Indebtedness to the University

A student becomes indebted to the University by non-payment of any fee or charge and by non-return of any College property. A student who is

indebted to the University and who fails to make a satisfactory settlement of the indebtedness upon receipt of due notice will be penalised.

Students who fail to pay charges and late charges levied by the University will not be permitted to attend classes, undertake assessments or be granted any course grades.

Students who fail to return material borrowed from the Clement Semmler Library by the due date may be refused further borrowing privileges at the discretion of the College Librarian or delegate.

Students who fail to return on time materials borrowed from College Resource units may be refused further borrowing privileges, at the discretion of the Dean or delegate.

Students unable to return Library or other Resource items borrowed from the College are required to pay the cost of their replacement. The minimum charge per item will be determined by the College.

Students who fail to return any materials borrowed from the College, or who fail to satisfy any financial obligation to the University may incur one or more of the following penalties:

- (1) refusal of further borrowing privileges;
- (2) withdrawal of authority to attend classes;
- (3) refusal of permission to enrol;
- (4) withholding of the testamur for an award.

Such penalty will remain in force until materials are returned, compensation made, or other such obligations satisfied.

Building Rules

Students are required to abide by the building closing times determined for the campus. Opening and closing times will be determined by an authorised College officer from time to time and will be shown on official notice boards. Building and other campus premises or grounds are to be vacated at any time when required by an authorised officer of the College.

In the interests of safety and student welfare, persons under the age of 16 years are not permitted on campus unless expressly authorised by the Dean.

In the interests of general comfort and safety, students, staff and visitors are required to obey the campus rules regarding smoking, eating and drinking.

Students seeking to serve alcoholic drinks at social functions are required to have the prior permission of the Dean or delegate.

Animals are not permitted on any part of the campus, except with the permission of an authorised College officer.

Students who fail to comply with these rules may be required to show cause why they should not lose their entitlement to membership and privileges of the College and, subsequently, may be subject to such penalty as may be determined by the Dean.

Traffic and Parking Rules

The College grounds are private property and the University reserves the right to regulate the entry of individuals and vehicles and their behaviour and operation within the grounds. Students may not bring vehicles onto College grounds unless they have the express permission of the Facilities Zone Manager and accept the College Traffic and Parking Rules and the penalties for the infringement of those rules.

Any vehicle brought onto the grounds is required to be driven, parked and managed in compliance with the College rules and in the observance of the directions of authorised University/College officers.

The College does not accept responsibility for any damage caused to vehicles while travelling, standing or parked in the grounds, nor for any damage to, or loss of, accessories and/or contents.

The bringing or driving of vehicles or cycles on paths, grassed areas, or elsewhere on the grounds, except for roadways and car parks, is prohibited except with the permission of an authorised University/College officer.

Where a breach of the Traffic and Parking Rules occurs, the following penalties will apply:

- for the first infringement or offence, an authorised officer will record the vehicle registration number and issue a written "first parking warning notice";
- for the second and subsequent infringements or offences, an authorised officer will record the vehicle registration number and issue a "second parking warning notice". The driver shall be required to pay a minimum fine of \$50.

Students may appeal in writing to the Dean against imposition of any penalty for infringement of the Traffic and Parking Rules.

Program Rules and Information

4800 Bachelor of Fine Arts

BFA

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Fine Arts is a three year full-time degree. It is intended to provide an introduction for those who wish to involve themselves as practitioners in the visual arts or related fields.

Program Objectives and Learning Outcomes

The program aims:

1. To provide an opportunity for students to undertake rigorous and demanding studies at tertiary level from a wide range of approaches and disciplines within the visual arts;
2. To provide the opportunity for students to explore aspects of the visual arts through critical examination of the possibilities they offer and by use of available technological resources;
3. To encourage students to develop an increased self-motivation and commitment to their studies;
4. To provide an environment in which students may develop as far as possible the following characteristics and abilities both during and subsequent to their involvement in the program:
 - an understanding of concepts relevant to aesthetics and the visual arts;
 - an understanding of various media through practice and experimentation with such media;
 - a confidence and competence in decision making, together with an appreciative and informed awareness of viewpoints in the visual arts other than their own; and
 - an understanding of the historical and theoretical underpinning of contemporary fine art practice.
5. To encourage students to realise their own intellectual and creative potential;
6. To increase students' awareness of, and sensitivity to, their environment.

Program Structure

Selection of Major Studies

Following the completion of Introductory Studies in Session 1, placement of students in a major sequence in Session 2 will be based on the results for Session 1 courses, student preferences and the availability of places.

Students will be allocated to the highest preference that their aggregate of marks determines.

Students may undertake either a major sequence of 60 units of credit OR a major of 42 units of credit and a minor in another discipline of 18 units of credit.

Approved Disciplinary Streams

Painting/Drawing
Printmaking
Sculpture, Performance, Installation
Photomedia
Time Based Art
Ceramics
Jewellery
Textiles

Electives

Electives allow students to plan their studies to specific needs, interests and career aspirations. Some students may choose electives to focus and deepen their studies, others will choose electives from a broad range of art, art education, design, digital media, art history and theory courses. Electives may be taken as courses offered by other faculties of the university.

General Education Requirements

Students are required to complete 12 units of credit in General Education. General Education contributes to the broad educational objectives of university study, and is usually taken at the Kensington campus. No more than 3UOC may be taken from COFA General Education courses.

For further information on available courses, please refer to the General Education section in this Handbook.

Honours

BFA Honours is a program of higher level study available to BFA students who wish to undertake research in Fine Arts, extending into a Honours fourth year. BFA students, in consultation with lecturers, should apply for entry to the program by the end of Session 4 but no later than Session 6. For entry to Honours, students must have achieved a Distinction average in 48 units of credit in Fine Arts core courses from Years 2 and 3, and have completed, or be enrolled in a course in research practices.

In their Honours year, students undertake a research program in their area of Fine Arts specialisation. Each student is allocated a supervisor. Honours students are expected to perform at a satisfactory (SY) level throughout the program. The course is full-time. The body of work undertaken will be presented and assessed in exhibition form, accompanied by the presentation of a research paper relating to the student's studio practice.

Students are required to undertake formal activities in conjunction with SART4030 and SART4044.

1. To be eligible to graduate with Honours students must complete all requirements of the Pass degree (see below) and complete an additional 48 units of credit over the equivalent of 1 year full-time.

a) Entry from completed 3rd year (without having graduated):

- To be eligible for entry to Honours a student must have achieved a distinction average in 48UOC in Fine Arts core courses in years two and three. Students will normally nominate at the end of year 2 but must nominate no later than the end of year 3, and must complete a course in research practices in art and design prior to entry to the Honours program.

b) Entry where candidate has graduated with a Pass-level degree:

- Applicants with a degree of Bachelor at pass level (i.e. without Honours) may be permitted to enrol in Honours with credit for all courses in the program prior to Honours. In this case applicants must satisfy the prerequisites for entry to the Honours or the equivalent of those prerequisites.

2. The Honours year consists of:

- a) an Honours Paper outlining studio research practice;
- b) Honours Studio Practice, which shall lead to the exhibition of work; and
- c) attendance at such seminars, lectures and classes shall be required.

Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the following weightings: Honours Studio Practice 75%, Honours Paper 25%. Honours is not awarded where the weighted mark is less than 65.

Academic Rules

1. For the Pass degree, a student must complete and pass 144 units of credit.

2. Students must complete 18 units of credit in approved Fine Arts Introductory Studies courses or their equivalent.

3. A degree must contain a major sequence of study or a combination of a major and a minor.

4. Students must complete 30 units of credit in courses approved as Fine Arts Contextual Studies [see Fine Arts Table B].

5. Students must complete 12 units of credit of General Education.

6. Students must complete 24 units of credit in electives.

7. A major sequence is defined as 60 units of credit in a single discipline. A major sequence may also be taken as 42 units of credit in one discipline with an 18 units of credit minor in another discipline. Major sequences are defined in Fine Arts Table A.

8. A minor sequence is defined as 18 units of credit in a single discipline which is available within but not taken as part of a major defined in Fine Arts Table A, or a sequence as defined in other undergraduate College of Fine Arts programs.

9. Not more than 60 units of credit in Level 1 courses will be counted towards the degree, with a minimum of 24 units of credit in Level 1 courses being successfully completed prior to undertaking Upper Level courses.

Fine Arts Table A - Major Courses

Discipline

Painting/Drawing

Stage 1 - SART1311, SART1305

Stage 2 - SART2320, SART2340, SART2330, SART2350

Stage 3 - SART3340, SART3360, SART3350, SART3370

Printmaking

Stage 1 - SART1313, SART1306

Stage 2 - SART2322, SART2342, SART2332, SART2352

Stage 3 - SART3342, SART3362, SART3352, SART3372

Sculpture/Performance/Installation

Stage 1 - SART1314, SART1307

Stage 2 - SART2323, SART2343, SART2333, SART2353

Stage 3 - SART3343, SART3363, SART3353, SART3373

Photomedia

Stage 1 - SOMA1312, SOMA1309

Stage 2 - SOMA2321, SOMA2341, SOMA2331, SOMA2351

Stage 3 - SOMA3341, SOMA3361, SOMA3351, SOMA3371

Time Based Art

Stage 1 - SOMA1315, SOMA1308

Stage 2 - SOMA2324, SOMA2344, SOMA2334, SOMA2354

Stage 3 - SOMA3344, SOMA3364, SOMA3354, SOMA3374

Ceramics

Stage 1 - SDES1316, SDES1319

Stage 2 - SDES2325, SDES2328, SDES2335, SDES2338

Stage 3 - SDES3345, SDES3348, SDES3355, SDES3358

Jewellery

Stage 1 - SDES1317, SDES1320

Stage 2 - SDES2326, SDES2329, SDES2336, SDES2339

Stage 3 - SDES3346, SDES3349, SDES3356, SDES3359

Textiles

Stage 1 - SDES1318, SDES1321

Stage 2 - SDES2327, SDES2345, SDES2337, SDES2355

Stage 3 - SDES3347, SDES3365, SDES3357, SDES3375

Fine Arts Table B - Contextual Studies Courses

SAHT2211	Eurocentred Visions: Grand Narratives in Western Art	(6 UOC)
SAHT2212	Art and Cultural Difference	(6 UOC)
SAHT2213	Memory and Self	(6 UOC)
SAHT2606	The Painting of Modern Life: French and English Painting in Focus	(6 UOC)
SAHT2612	Art and its Others: Interdisciplinarity in Contemporary Art	(6 UOC)
SAHT2633	Peripheral Visions: Perspectives of Colonial and Post-Colonial Art	(6 UOC)
SAHT2642	Art, Gender, Sexuality and the Body	(6 UOC)
SAHT2661	Experimental Film and Video since the 1960s	(6 UOC)
SAHT2663	Avant-Garde Cinema: 1900-1950	(6 UOC)
SAHT2667	After Modern Sculpture: Installation, Structures and Space	(6 UOC)
SAHT2674	A History of Drawing	(6 UOC)
SAHT3211	Art After Postmodernism	(6 UOC)
SAHT3212	Art and Everyday Life	(6 UOC)
SAHT3613	Digital Theory and Aesthetics	(6 UOC)
SAHT3614	Screen Culture	(6 UOC)
SAHT3634	Peripheral Visions 2: Perspectives of Colonial and 'Peripheral' Art Practiced in Asia, India, SE Asia	(6 UOC)
SAHT3669	Critical Theories of Photography	(6 UOC)

4812 Bachelor of Fine Arts Bachelor of Arts

BFA BA

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BFA BA degree program is the equivalent of four years full-time study. It enables students to combine the broad range of offerings available in the BA with the focused study of the visual arts and visual culture provided by the BFA. The major study in the BFA develops students' career-related skills and experiences for the art and cultural industries or as arts practitioners as well as a depth of knowledge in historical and social studies. Graduates will be prepared for employment in the arts and cultural industries.

Students undertaking this combined degree program complete the core requirements of both the Bachelor of Fine Arts and the Bachelor of Arts.

Program Objectives and Learning Outcomes

Students will acquire a sound knowledge base in both in the Fine Arts and in their chosen specialisation/s in the Bachelor of Arts component of their degree.

Program Structure

Please refer to the 'Academic Rules' below for program requirements and structure.

For information on courses available within the Fine Arts and Arts components of this combined degree program, students may also wish to refer to the following program entries:

4800 Bachelor of Fine Arts

3400 Bachelor of Arts

Academic Rules

1. Students must complete a program of study of 192 units of credit, of which:

a) at least 90 units of credit must be obtained in courses offered by the College of Fine Arts;

b) at least 84 units of credit must be obtained in courses approved for the Bachelor of Arts degree (excluding those offered by the College of Fine Arts); and

c) 18 units of credit in open electives.

2. The BFA component of the combined degree must include:

a) a major sequence (at least 42 units of credit) in an approved Fine Arts discipline [see Fine Arts Table A];

b) 12 units of credit in Fine Arts Introductory Studies;

c) SAHT1101 and SAHT1102; and

d) 24 units of credit from COFA electives.

3. Of the units of credit obtained in courses approved for the BA degree (excluding those offered by the College of Fine Arts):

a) between 24 and 36 units must be obtained in Level 1 courses, including no more than 12 Level 1 units of credit in any one sequence of study;

b) no more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program;

c) at least 18 units must be obtained in Upper Level courses other than those taught by the school, department, unit or interdisciplinary program in which a major is being taken; and

d) at least 42 units of credit must be obtained in one of the following major sequences within the Faculty of Arts and Social Sciences:

AUST Australian Studies

CHIN Chinese Studies

COMD Development Studies

EDST Education

ENGL English

Environmental Studies

EURO European Studies

FREN French

GERS German Studies

GREK Greek

HIST History

HPSC History and Philosophy of Science

INDO Indonesian Studies

JAPN Japanese Studies

KORE Korean Studies

LING Linguistics

MEFT Media, Culture and Technology/Film/Theatre and Performance Studies

MUSC Music

PROGRAM STRUCTURE: 4800 BACHELOR OF FINE ARTS

		STAGE 1			STAGE 2			STAGE 3			HONOURS		
		Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC
C O R E	MAJOR and MINOR	78uoc Fine Arts Studio - made up of 18uoc Introductory Courses & 60uoc from Major Discipline or 42uoc Major and 18uoc Minor											
		Introductory Studies	18	Fine Arts Major	6	Fine Arts Major	6	Fine Arts Major	6	Fine Arts Major	6	SART4044 Honours Studio Practice	18
				Fine Arts Major	6	Fine Arts Major OR Minor*	6	Fine Arts Major OR Minor*	6	Fine Arts Major	6	SART4044 Honours Studio Practice	18
	CONTEXTUAL STUDIES	SAHT1101 Mapping the Modern	6	SAHT1102 Mapping the Postmodern	6			Contextual Studies course	6	Contextual Studies course	6	SART4030 Honours Paper	6
		30uoc in Contextual Studies											
N O N - C O R E	OPEN ELECTIVES	24uoc in Electives											
				Drawing Elective	6	Elective	6	Elective	6	Elective	6		
	GENERAL EDUCATION					General Education x 2	6			General Education x 2	6		
		12uoc General Education											
		Units of Credit											
		48											
		48											

*Minor taken as part of 18uoc sequence, with Major reduced to 42uoc

PECO Political Economy
 PHIL Philosophy
 POLS Politics & International Studies
 RUSS Russian Studies
 SLSP Policy Studies
 SOCA Sociology and Anthropology
 SPAN Spanish and Latin American Studies
 WOMS Women's and Gender Studies

4. No student may commence Upper Level subjects until 24 Level 1 units of credit have been successfully completed.

5. Students may be eligible for entry to Honours in either the BFA or the BA by completing an additional year of study (48 units of credit). For entry to the BFA Honours program, a student must complete a distinction average in 48 units of credit of COFA courses from Years 2, 3 and 4.

Fine Arts Table A - Major Courses

Discipline

Painting/Drawing

Stage 1 - SART1311, SART1305

Stage 2 - SART2320, SART2330

Stage 3 - SART3340, SART3350, SART3370

Printmaking

Stage 1 - SART1313, SART1306

Stage 2 - SART2322, SART2332

Stage 3 - SART3342, SART3352, SART3372

Sculpture/Performance/Installation

Stage 1 - SART1314, SART1307

Stage 2 - SART2323, SART2333

Stage 3 - SART3343, SART3353, SART3373

Photomedia

Stage 1 - SOMA1312, SOMA1309

Stage 2 - SOMA2321, SOMA2331

Stage 3 - SOMA3341, SOMA3351, SOMA3371

Time Based Art

Stage 1 - SOMA1315, SOMA1308

Stage 2 - SOMA2324, SOMA2334

Stage 3 - SOMA3344, SOMA3354, SOMA3374

Ceramics

Stage 1 - SDES1316, SDES1319

Stage 2 - SDES2325, SDES2335

Stage 3 - SDES3345, SDES3355, SDES3358

Jewellery

Stage 1 - SDES1317, SDES1320

Stage 2 - SDES2326, SDES2336

Stage 3 - SDES3346, SDES3356, SDES3359

Textiles

Stage 1 - SDES1318, SDES1321

Stage 2 - SDES2327, SDES2337

Stage 3 - SDES3347, SDES3357, SDES3375

4801 Bachelor of Art Education

BArEd

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Art Education comprises an art education major, professional experience in art education, courses in fine arts, including art history and theory, electives and General Education courses.

Program Objectives and Learning Outcomes

Secondary art teachers are required to fulfil many and varied responsibilities. This program prepares students to function as a visual arts and design teacher in secondary schools, primary schools, community organisations, museums and galleries, as a curriculum development officer, designer, artist, art and design historian/theorist/critic. The opportunity exists within the course for students to focus on any of these roles.

Program Structure

The Foundation Year

All students complete foundation courses in art education (including school field experiences), fine arts and art history and theory. These courses provide a core, foundational experience. In subsequent years students develop plans emphasising their interests in the practices of art education and fine arts and design, contextualised through courses in their art education major including professional experience.

Art Education

Courses in art education provide students with investigations and applications of the theoretical and practical knowledge of the art educator. These compulsory courses include fieldwork and professional experience in a range of educational, cultural, community and industry contexts and the Professional Experience Internship.

Fine Arts

Courses in fine arts include: ceramics, drawing, jewellery, painting, photomedia, printmaking, sculpture, performance and installation, textiles and time based art. Students may plan sequences of courses in the fine arts as a major (at least 24 units of credit). In completing a Fine Arts major, students may choose courses offered as electives and the core in the Bachelor of Fine Arts.

Art History and Theory

Students complete SAHT1101 Mapping the Modern and SAHT1102 Mapping the Postmodern in their foundation year, and may take other courses as part of their electives.

Electives

Electives allow students to plan their studies to develop specific needs, interests and career aspirations. Students are encouraged to take at least one art education elective. Some students may choose electives to focus and deepen their studies, others will choose electives across a broad range of art education, design, digital media, art history and theory courses. Electives may be taken as courses offered by other faculties of the University.

Year 1

SAED1402	Learning and Teaching Art & Design: Practice & Structure	(3 UOC)
SAED1403	Foundations of Art and Design Education	(6 UOC)
SAED1407	Making Curriculum in Art & Design	(6 UOC)
SAED1491	Professional Experience Stage 1	(3 UOC)
SAED2405	Special Education in Art and Design Contexts	(6 UOC)
SAHT1101	Mapping the Modern	(6 UOC)
SAHT1102	Mapping the Postmodern	(6 UOC)
SART1401	Foundation Studies: Draw/Paint/Print (BArEd)	(6 UOC)
SART1402	Foundation Studies: Sculpt/Photo/Time (BArEd)	(6 UOC)

Year 2

Students must complete the following core courses, Fine Arts major courses (12 units of credit), electives (12 units of credit) and General Education (6 units of credit):

SAED2401	Educational Psychology	(6 UOC)
SAED2402	Learning and Teaching Art & Design: Language & Communication	(3 UOC)
SAED2491	Professional Experience Stage 2	(3 UOC)
SAED4051	Practices of Research in Art, Design and Education	(6 UOC)

Year 3

Students must complete the following core courses, Fine Arts major courses (12 units of credit), an elective (6 units of credit) and an Art Education elective (6 units of credit):

SAED2406	The Sociology of Education	(6 UOC)
SAED3402	Learning and Teaching Art & Design: Classroom Management	(3 UOC)
SAED3404	Practices of Art and Design History in Education	(6 UOC)
SAED3407	Curriculum Studies in Art Education	(6 UOC)
SAED3491	Professional Experience Stage 3	(3 UOC)

Year 4

Students must complete the following core courses, an elective (6 units of credit) and General Education (6 units of credit):

SAED4403	Aesthetics in Art, Design & Education	(6 UOC)
SAED4406	Philosophical Issues in Education	(6 UOC)
SAED4491	Professional Experience Internship	(24 UOC)

PROGRAM STRUCTURE: 4812 BACHELOR OF FINE ARTS BACHELOR OF ARTS

PROGRAM STRUCTURE: 4812 BACHELOR OF FINE ARTS BACHELOR OF ARTS											
STAGE 1			STAGE 2			STAGE 3			STAGE 4		
Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC
54uoc Fine Arts Studio - made up of 12uoc Introductory Courses & 42uoc from Major Discipline											
FINE ARTS	Introductory Studies	Fine Arts Major	6	Fine Arts Major	6	Fine Arts Major	6	Fine Arts Major	6		
		Fine Arts Major				Fine Arts Major	6				
	12						Fine Arts Major	6			
CONTEXTUAL STUDIES & COFA ELECTIVES	SAHT1101 Mapping the Modern		6	COFA Elective	6	COFA Elective	6	COFA Elective	6		
	SAHT1102 Mapping the Postmodern		6								
12uoc in Fine Arts Contextual Studies + 24uoc in COFA Electives											
42uoc in BA Major											
BA MAJOR	Major (Level 1)		6	Major (Upper Level)	6	Major (Upper Level)	6	Major (Upper Level)	6		
42uoc in BA Electives											
BA ELECTIVES				Arts Elective (Level 1)	6	Arts Elective (Level 1)	6	Arts Elective (Upper Level)	6	Arts Electives (undefined)	12
18uoc Open Electives											
OPEN ELECTIVES								Elective	6	Elective x 2	12
192 Units of Credit											
			48				48				48

PROGRAM STRUCTURE: 4801 BACHELOR OF ART EDUCATION

*Honours students only, taken in lieu of 6uoc electives

*Honours students only, taken in lieu of 6uoc electives

General Education Requirements

Students are required to complete 12 units of credit in General Education. General Education contributes to the broad educational objectives of university study, and is usually taken at the Kensington campus. No more than 3UOC may be taken from COFA General Education courses.

For further information, please refer to the General Education section in this Handbook.

Honours

The Bachelor of Art Education may be completed with Honours. Please refer to the Academic Rules for more information.

Academic Rules

To complete the requirements for the award of the degree of Bachelor of Art Education:

1. For the Pass degree, a student must complete and pass 192 units of credit which shall include:

- 69 units of credit in Core Studies in Art Education;
- 33 units of credit Professional Experience in Art Education;
- a Fine Arts Major, consisting of 12 units of credit in Fine Arts Introductory courses, SAHT1101 and SAHT1102, and at least 24 units of credit from Fine Arts courses;
- 12 units of credit of approved General Education courses;
- 24 units of credit in open electives; and
- 6 units of credit in Art Education electives.

2. No more than 60 units of credit in Level 1 courses will be counted towards the degree, with a minimum of 24 units of credit in Level 1 courses being successfully completed prior to undertaking Upper Level courses.

3. Honours will be awarded to students with a Distinction average in at least 42 units of credit in Upper Level Core Studies in Art Education, who have successfully completed SAED4051 Practices of Research in Art, Design and Education and SAED4055 Honours Research Project in Art and Design Education Studies. Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the basis of results in SAED4051 and SAED4055 and in accordance with School and Faculty policies.

4808 Bachelor of Design Bachelor of Art Education

BDes BArTEd

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Design Bachelor of Art Education aims to prepare students as visual arts and design educators and design professionals working in graphic and media design, film and television production and post-production, festivals theatre exhibition and display, furnishings and interiors, ceramic textile and jewellery product design.

Program Objectives and Learning Outcomes

Students will acquire the skills needed to teach Technology and Applied Studies, particularly design and technology, in secondary schools, primary schools, community organisations, museums, and galleries and to work as curriculum development officers.

Program Structure

The Bachelor of Design Bachelor of Art Education comprises an art and design education double major, courses in design, including design, history theory and aesthetics, electives and General Education courses.

The Foundation Year

All students complete foundation courses in art education (including school field experiences), design and design history theory and aesthetics. These courses provide a core, foundational experience. In subsequent years students develop plans emphasising their interests in the practices of art education and design, contextualised through courses in their art education major including professional experience.

Art and Design Education

Courses in art and design education provide students with investigations and applications of the theoretical and practical knowledge of the art and design educator. These compulsory courses include fieldwork and professional experience in a range of educational, cultural, community and industry contexts and the Professional Experience Internship.

Design

Studio disciplines in design include: applied, ceramics, environments, graphics, jewellery and textiles. Students may plan sequences of courses in design studio disciplines as a major (at least 24 units of credit) or a minor (at least 12 units of credit). The Design Studio component culminates in the Design Internship and Design Studio Project. Students also undertake a sequence of Design and Computer courses.

Design History, Theory and Aesthetics

Students complete 18 units of credit in design history, theory and aesthetics. Additional courses may be chosen as a design history, theory and aesthetics minor, comprising at least 18 units of credit.

Electives

Electives allow students to plan their studies to specific needs, interests and career aspirations. Some students may choose electives to focus and deepen their studies, others will choose electives across a broad range of art, art education, design, digital media, art history and theory courses. Electives may be taken as courses offered by other faculties of the university.

General Education Requirements

Students are required to complete 6 units of credit in General Education. General Education contributes to the broad educational objectives of university study, and is usually taken at the Kensington campus. No more than 3UOC may be taken from COFA General Education courses.

For further information, please refer to the General Education section in this Handbook.

Honours

The Bachelor of Design Bachelor of Art Education may be completed with Honours. Students must apply for entry into the Honours pathway by the beginning of Session 9.

Honours in Design will be awarded to students with a Distinction average in at least 42 units of credit in Core Studies in Design taken at Upper Level who have successfully completed SDES4104. Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the basis of results in SDES4104 and in accordance with School and Faculty policies.

Honours in Art Education will be awarded to students with a Distinction average in at least 42 units of credit in Upper Level Core Studies in Art Education, who have successfully completed SAED4051 Practices of Research in Art, Design and Education and SAED4055 Honours Research Project in Art and Design Education Studies. Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the basis of results in SAED4051 and SAED4055 and in accordance with School and Faculty policies.

Academic Rules

1. A student must complete 240 units of credit, made up of:

- 75 units of credit in Core Studies in Art Education;
- 33 units of credit Professional Experience in Art Education;
- 90 units of credit in Core Studies in Design, which shall include a major in a Design Studio discipline of at least 24 units of credit;
- 18 units of credit in History Theory;
- 18 units of credit in Elective Studies; and
- 6 units of credit in General Education.

2. Students may complete no more than 60 units of credit at Level 1 with a minimum of 24 units of credit of Level 1 courses being successfully completed prior to undertaking Upper Level courses.

3. Honours in Design or Art Education will be awarded to students with a Distinction average in at least 42 units of credit in Core Studies in Design or Art Education taken at Upper Level who have successfully completed certain prescribed courses. Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the basis of results in those prescribed courses and in accordance with School and Faculty policies.

PROGRAM STRUCTURE: 4808 BACHELOR OF DESIGN BACHELOR OF ART EDUCATION

****Design Honours take SDES4104 in lieu of 6uoc elective**

****Design Honours take SDES4104 in lieu of 6uoc elective**

4802 Bachelor of Design

BDes

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Design is the equivalent of four years full-time study with the opportunity to undertake Honours study in the fourth year.

This program provides an education to students who wish to enter a range of different areas of the design profession, including graphic design, media design, film, television production and post-production, illustration, publications, interiors, theatre, exhibitions, display, festivals and furnishings, ceramics, textiles, jewellery and product design.

In Year 1, students will be involved in a comprehensive and intensive range of 2D, 3D and 4D (time based) experiences as well as the acquisition of historical, theoretical and technological skills and understandings. These include studying human individuals, society, the environment, and the application of computer skills to design.

In Years 2 and 3, students will extend their work on projects with the opportunity to integrate the following: graphics/media design, applied/object design, environments/spatial design, ceramics design, textiles design and jewellery design. Historical, theoretical and technological contexts will also be studied.

In Year 4, Design Studio Project leads into a graduation project/exhibition and is designed to parallel professional practice while integrating theoretical design studies. Year 4 students also undertake a period of work experience via an approved professional placement.

This program recognises the College of Fine Arts' particular strengths, resources and requirements to provide an undergraduate program which places emphasis on an integrated approach rather than on narrow vocational specialisations. These strengths are its technology and its relationship with industry, its courses in visual arts, art education and art theory, and the ability to offer design from a creative and cross disciplinary base.

Program Objectives and Learning Outcomes

This program aims to provide students with a sound knowledge base for entry into a wide range of design-related professions. Students will acquire an understanding of the history and theory of design, in addition to design practice.

Program Structure

Year 1

SDES1101	Design Studio 1 - Elements and Principles of Design	(6 UOC)
SDES1102	Design Studio 3 - Analysing Design Principles	(6 UOC)
SDES1104	Interactive Systems	(6 UOC)
SDES1106	Design and Computers 1 - Introduction to Graphics Computing	(6 UOC)
SDES1107	Design Studio 2 - Materials, Equipment and Process in the Design Studio	(6 UOC)
SDES1108	Design Studio 4 - Thinking and Theory in the Design Studio	(6 UOC)
SDES1110	Design and Computers 2 - Introduction to CAD	(6 UOC)
SAHT1301	Design History, Theory and Aesthetics 1	(6 UOC)

Design Studio Majors

Students must complete 48 units of credit in Design Studio courses composed of 2 approved disciplinary streams; i.e. if they start the design studio Applied/Object stream and design studio Ceramics stream in Session 3, they should complete both sequences subsequently in Session 4, 5 and 6. Students must also complete 12 units of credit in an additional stream in Year 2. The Design Studio Majors are:

Applied/Object
Environments
Graphics/Media
Ceramics
Jewellery
Textiles

Please refer to the Program Schema or contact the Student Centre at the College of Fine Arts for further information on the Design Studio majors.

Year 2

Students must complete the Design Studio majors (36 units of credit) and the following core courses:

SDES2107	Design and Computers 3 - CAD & Graphics Computing	(6 UOC)
SAHT2301	Design History, Theory and Aesthetics 2	(6 UOC)

Year 3

Students must complete the Design Studio majors (24 units of credit), the following core courses and an elective (6 units of credit):

SDES2116	Design Practice	(6 UOC)
SDES3107	Design and Computers 4 - Introduction to Multimedia	(6 UOC)
SAHT3301	Design History, Theory and Aesthetics 3	(6 UOC)

Year 4

Students must complete the following core courses, electives (12 units of credit) and General Education (12 units of credit):

SDES4101	Design Studio Project	(12 UOC)
SDES4102	Professional Experience Program	(12 UOC)

General Education Requirements

Students are required as part of their studies, to complete 12 units of credit in General Education courses or their equivalent. General Education courses, normally taken at Kensington campus, contribute to the broad educational objectives of the degree. No more than 3UOC may be taken from COFA General Education courses.

For further information, please refer to the General Education section in this Handbook.

Honours

The degree of Bachelor of Design is awarded as a degree with Honours where eligible students have achieved superior grades in their design studies and completed SDES4104 Honours Project and SAED4051 Practices of Research in Art and Design Education.

Academic Rules

The degree of Bachelor of Design is awarded as a Pass degree at the completion of four years full-time study or a degree with Honours where eligible students have completed the Honours pathway in the program.

1. A student must complete 192 units of credit, which shall include:

- 24 units of credit in Introductory Design Studio courses;
- 48 units of credit in Design Studio courses composed of 2 approved disciplinary streams;
- 12 units of credit in Design Studio courses in an additional disciplinary stream;
- 24 units of credit in approved Design computing courses;
- 30 units of credit in courses approved for Design Contextual Studies;
- 12 units of credit in General Education; and
- 18 units of credit in electives.

2. No more than 60 units of credit of Level 1 courses may be undertaken, with a minimum of 24 units of credit of Level 1 courses being successfully completed prior to undertaking Upper Level courses.

3. Honours will be awarded to students with a Distinction average in at least 42 units of credit in Upper Level Core Studies in Design, who have successfully completed SAED4051 Practices of Research in Art, Design and Education and SDES4104 Honours Project. Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the basis of results in SAED4051 and SDES4104 and in accordance with School and Faculty policies.

4803 Bachelor of Art Theory

BArtTh

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

PROGRAM STRUCTURE: 4802 BACHELOR OF DESIGN

	STAGE 1			STAGE 2			STAGE 3			STAGE 4		
	Session 1	uoc	Session 2	uoc	Session 1	uoc	Session 2	uoc	Session 1	uoc	Session 2	uoc
	108uoc Design Studio											
DESIGN STUDIO	SDES1101 Design Studio 1	6	SDES1102 Design Studio 3	6	Design Studio	6	Design Studio	6	Design Studio	6	SDES4101 Design Studio Project	
	SDES1107 Design Studio 2	6	SDES1108 Design Studio 4	6	Design Studio	6	Design Studio	6	Design Studio	6	SDES4102 Professional Experience	12
					Design Studio	6	Design Studio	6				12
24uoc Computing Studies												
DESIGN COMPUTING	SDES1106 Design & Computers 1	6	SDES1110 Design & Computers 2	6	SDES2107 Design & Computers 3	6	SDES3107 Design & Computers 4	6				
30uoc Contextual Studies												
CONTEXTUAL STUDIES	SAHT1301 Design History Theory Aesthetics 1	6	SDES1104 Interactive Systems	6	SAHT2301 Design History Theory Aesthetics 2	6	SDES2116 Design Practice	6	SAHT3301 Design History Theory Aesthetics 3	6		
18uoc Electives (6uoc for Honours students)												
ELECTIVES									Elective	6	Elective	6
											SAED4051 Practices of Research in Art, Design & Education ¹	6
GENERAL EDUCATION											SDES4104 Honours Project ¹	6
									General Education	6	General Education	6
192 Units of Credit												
		48				48				48		48

¹For Honours students in lieu of 12uoc electives

PROGRAM STRUCTURE: 4803 BACHELOR OF ART THEORY

		STAGE 1			STAGE 2			STAGE 3			HONOURS		
		Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC
C O R E	MAJOR	78uoc Art & Design Theory Major											
		SAHT1101 Mapping the Modern	6	SAHT1102 Mapping the Postmodern	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6	SAHT4211 Thesis A	12
		SAHT1211 Theories of the Image	6	SAHT1212 Theories of Art History & Culture	6	Art Theory Major	6	Art Theory Major	6	SAHT4212 Honours Seminar	6	SAHT4213 Thesis B	24
	CONTEXTUAL STUDIES	SAHT1221 Contexts for Art	6	Contextual Studies	6	Contextual Studies	6	Contextual Studies	6	Contextual Studies	6		
		30uoc in Contextual Studies											
N O N - C O R E	OPEN ELECTIVES	24uoc in Electives											
		Elective	6	Elective	6	Elective	6	Elective	6	Honours Elective	6		
	GENERAL EDUCATION	12uoc General Education											
						General Education x 2	6	General Education x 2	6				
		144 Units of Credit			48				48				48

Program Description

The Bachelor of Art Theory offers intensive study of the visual arts and design. The degree program encourages students to take full advantage of its location within one of Australia's largest art and design schools and a leading university. The degree offers students in-depth study of art and/or design history and theory and prepares students for research careers or professional employment in the arts or design industries. Examples of likely careers include art administration, art and design criticism, art historical research, curating, museum education and arts project management.

Program Objectives and Learning Outcomes

Graduates from the Bachelor of Art Theory will have the ability to make informed critical judgements about various forms of visual culture, with a particular emphasis on understanding the visual arts and design and the historical-theoretical interpretation of images and objects.

Graduates may benefit from the opportunity to combine theoretical and historical studies with studio-based subjects in art and design and to draw on a wide range of electives offered within the University.

Program Structure

The Bachelor of Art Theory comprises a theory major and a co-major, open electives and General Education courses. Students take a total of 48 units of credit per year; the program totals 144 units. The duration of the program is three years full-time equivalent.

Theory Major

Students take courses in the Art and Design Theory major to gain an understanding of the history of Art and Design. Some courses address key methods in art history. These courses provide a framework for other studies in the program.

Contextual Studies

In addition, students take a sequence of contextual studies courses, normally in Art and Design contexts.

Students may take a different sequence, subject to the approval of the course authority.

Art Industry Contexts courses explore the institutional contexts in which art is exhibited, catalogued, collected, interpreted, evaluated and promoted. Although careers within the arts-related professions frequently require further study, these courses provide 'hands-on' experience in writing and publishing, and curating.

Art and Design Contexts includes courses which allow students to place the broader understandings of art and design history and theory explored in the major into the context of a close investigation of specific media histories.

Studio Contexts includes practical courses in the art and design studio that explore the workings of either the design industry or art practice.

Open Electives

These courses allow students to tailor their studies to their specific interests and career aspirations. Students are encouraged to take at least one elective from studio courses offered by the Schools of Art, Art Education, Media Arts or Design Studies. Courses may be chosen from any of those offered by Schools of the College of Fine Arts, or by other Faculties of UNSW, subject to prerequisite requirements.

Table A: Approved Courses for the Major in Art and Design Theory

Level 1

SAHT1101	Mapping the Modern	(6 UOC)
SAHT1102	Mapping the Postmodern	(6 UOC)
SAHT1211	Theories of the Image	(6 UOC)
SAHT1212	Theories of Art History and Culture	(6 UOC)
SAHT1301	Design History, Theory and Aesthetics 1	(6 UOC)

and/or Level 1 courses for which there are no pre-requisites, subject to approval by the Program Authority.

Upper Level

Critical Theory and Museum Studies

SAHT2641	Modern Aesthetics: From the Enlightenment to the 21st Century	(6 UOC)
SAHT3212	Art and Everyday Life	(6 UOC)
SAHT3213	Museum Studies: Exhibitions, Collections and Material Culture	(6 UOC)

European, Australian and Other Histories

SAHT2211	Eurocentred Visions: Grand Narratives in Western Art	(6 UOC)
SAHT2214	Approaches to Australian Art	(6 UOC)

Subjectivity and the Body

SAHT2213	Memory and Self	(6 UOC)
SAHT2642	Art, Gender, Sexuality and the Body	(6 UOC)
SAHT2644	Psychoanalysis and Art	(6 UOC)

Colonial/ Postcolonial Studies

SAHT2212	Art and Cultural Difference	(6 UOC)
SAHT2632	The Arts of the Pacific: Image, Myth and History	(6 UOC)
SAHT2633	Peripheral Visions: Perspectives of Colonial and Post-Colonial Art	(6 UOC)
SAHT3634	Peripheral Visions 2: Perspectives of Colonial and 'Peripheral' Art Practiced in Asia, India, SE Asia	(6 UOC)

Digital and Design Histories

SAHT2301	Design History, Theory and Aesthetics 2	(6 UOC)
SAHT3214	Research Project	(6 UOC)
SAHT3301	Design History, Theory and Aesthetics 3	(6 UOC)
SAHT3613	Digital Theory and Aesthetics	(6 UOC)
SAHT3614	Screen Culture	(6 UOC)

For enrolment into Research Project, approval by the Head of School is required.

Or Upper Level courses subject to approval by the Program Authority.

Table B: Approved Courses for Contextual Studies in Art and Design

Art Industry Contexts

SAHT1221	Contexts for Art	(6 UOC)
SAHT1222	The Production of Art	(6 UOC)
SAHT2221	Writing for Art and Design	(6 UOC)
SAHT2222	Methods of Research and Writing on Art and Design	(6 UOC)
SAHT3221	Contexts, Professions and Practices	(6 UOC)

Art and Design Contexts

SAHT2612	Art and its Others: Interdisciplinarity in Contemporary Art	(6 UOC)
SAHT2661	Experimental Film and Video since the 1960s	(6 UOC)
SAHT2663	Avant-Garde Cinema: 1900-1950	(6 UOC)
SAHT2667	After Modern Sculpture: Installation, Structures and Space	(6 UOC)
SAHT2674	A History of Drawing	(6 UOC)
SAHT2676	Art, Technology and New Media	(6 UOC)

Studio Contexts

Any SART, SOMA or SDES studio course, subject to approval of the Program Authority.

General Education Requirements

Students are required as part of their studies, to complete 12 units of credit in General Education courses or their equivalent. General Education courses, normally taken at Kensington campus, contribute to the broad educational objectives of the degree. No more than 3UOC may be taken from COFA General Education courses.

For further information, please refer to the General Education section in this Handbook.

Honours

To be eligible to graduate with Honours students must complete all requirements of the Pass degree (see below) and complete an additional 48 UOC over the equivalent of 1 year full-time.

a) Entry from completed 3rd year (without having graduated):

- To be eligible for entry to Honours a student must have achieved a distinction average in 48UOC in Art Theory core courses in years two and three. Students will normally nominate at the end of year 2 but must nominate no later than the end of year 3, and must complete a course in research practices in art and design prior to entry to the Honours program.

b) Entry where candidate has graduated with a Pass-level degree:

- Applicants with a degree of Bachelor at pass level (i.e. without Honours) may be permitted to enrol in Honours with credit for all courses in the program prior to Honours. In this case applicants must satisfy the prerequisites for entry to the Honours or the equivalent of those prerequisites.

The additional Honours study consists of:

- SAHT4211 Thesis A and SAHT4213 Thesis B;
- SAHT4212 Honours Seminar [which may be substituted by an Upper Level or postgraduate course, subject to approval by the Program Authority]; and

3. 6 units of credit from an Upper Level or postgraduate course, subject to approval by the Program Authority.

Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the following weightings: Thesis 70%, Honours Seminar 15%, Elective course 15%. Honours is not awarded where the weighted mark is less than 65.

Academic Rules

Students must complete and pass 144 units of credit. This comprises:

- a major in Art and Design Theory, made up of 78 units of credit in approved courses [see Art Theory Table A], which must include the following Level 1 courses: SAHT1101, SAHT1102, SAHT1211 and SAHT1221;
- 30 units of credit in courses approved as Art Theory Contextual Studies [see Art Theory Table B], which must include SAHT1221;
- 12 units of credit in approved General Education courses;
- 24 units of credit in electives; and
- no more than 60 units of credit in Level 1 courses will be counted towards the degree, with a minimum of 24 units of credit in Level 1 courses being successfully completed prior to undertaking Upper Level courses.

4803 Bachelor of Art Theory/9302 Master of Art Administration Fast-Track Program

This 'fast-track' progression recognises that students who have completed the Bachelor of Art Theory (BArTh) have undertaken undergraduate studies which prepare them specifically for the Master of Art Administration (MArtAdmn) and will allow those students to benefit from specialisation at undergraduate level. The 'fast-track' progression enables students to take four courses of the Master of Art Administration in the third year of the Bachelor of Art Theory. This effectively reduces the total number of courses and the time taken to complete both programs by a full session. The program can be completed in 4 years full-time equivalent study.

Academic Rules

1. Admission in the first instance is to the Bachelor of Art Theory (4803). At the end of Year 2, candidates will be permitted to transfer to the Fast-Track Program, subject to the approval of the Head of School of Art History and Theory. Approval will normally require an average of 65% in courses studied.
2. Within the fast-track program, 144 units of credit are credited to the undergraduate component of the degree and 72 units of credit are credited to the postgraduate component of the degree.
3. The undergraduate component of the degree must include:
 - a. a major comprising 72 units of credit in Art and Design Theory, including 12 units of credit of MArtAdmin core courses other than SAHT9115 and SAHT9116;
 - b. Contextual Studies [36 units of credit] in Art and Design Contexts, including 12 units of credit of MArtAdmin core options. The co-major shall not include SAHT3222 Industry Placement;
 - c. 24 units of credit of electives; and
 - d. 12 units of credit in General Education.
4. The postgraduate component of the degree must include:
 - a. 24 units of credit of core courses from the Master of Art Administration, including SAHT9115 Internship and SAHT9116 Research Paper. Students who have completed SAHT2221 Genres of Art Writing are excluded from SAHT9112 Writing for Different Cultures and Audiences; and
 - b. 48 units of credit of Master of Art Administration core options. Subject to approval, students may substitute for core options, other postgraduate courses offered by UNSW.
5. For entry to BArTh Honours a student must complete the Theory major and have achieved an average of 75% across Theory major courses in Stages 2 and 3. Students would normally complete an Honours year at the completion of the Fast Track Program.
6. Where a student does not go on to complete the fast track final year, he or she may graduate with a BArTh provided normal program rules are met. Up to 24 units of credit of postgraduate courses completed may be credited towards the BArTh.
7. Students taking the Fast-track Bachelor of Art Theory and Master of Art Administration are not permitted to take out the Graduate

Certificate in Art Administration. 'Fast-track' students, however, are permitted to exit with the Bachelor of Art Theory and Graduate Diploma of Art Administration (3.5 years full-time equivalent study). In this case students must complete:

- SAHT9111 Management and Organisation
- SAHT9113 Cultural Property, Ethics and the Law
- SAHT9114 Exhibition Management and Curatorial Studies
- SAHT9126 Organisational Psychology

Plus 4 postgraduate core option/elective courses from the Master of Art Administration.

4806 Bachelor of Art Theory Bachelor of Arts

BArTh BA

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BArTh BA degree is the equivalent of four years full-time study. It enables students to combine the broad range of offerings available in the BA with the focussed study of the visual arts and visual culture provided by the BArTh. The co-major in Contextual Studies in the BArTh develops students' careers-related skills and experiences and the Art and Design Theory major provides depth of knowledge about art and design, both in historical and contemporary contexts. The BA component of the degree offers a wide range of complementary humanities and social science studies. Graduates will be prepared for employment in the arts and cultural industries.

Students undertaking this combined degree program complete the core requirements of both the Bachelor of Art Theory and the Bachelor of Arts, together with approved electives.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in Art Theory and also their chosen Arts specialisation/s.

Program Structure

Please refer to the 'Academic Rules' below for program requirements and structure.

For information on courses available within the Art Theory and Arts components of this combined degree program, students may also wish to refer to the following program entries:

- 4803 Bachelor of Art Theory
- 3400 Bachelor of Arts

Academic Rules

1. Students must complete a program of study of 192 units of credit, of which:
 - a) at least 90 units of credit must be obtained in courses offered by the College of Fine Arts;
 - b) at least 84 units of credit must be obtained in courses approved for the Bachelor of Arts degree (excluding those offered by the College of Fine Arts); and
 - c) 18 units of credit in electives.
2. The BArTh component of the combined degree must include:
 - a) a major in art and design theory, consisting of 60 units of credit in approved courses [see Art Theory Table A in the BArTh section]. The major in Art and Design Theory must include the following Level 1 courses: SAHT1101 Mapping the Modern, SAHT1102 Mapping the Postmodern, SAHT1211 Theories of the Image and SAHT1212 Theories of Art History and Culture; and
 - b) a student must complete 30 units of credit in courses approved as Art Theory Contextual Studies [see Art Theory Table B in the BArTh section], which must include SAHT1221 Contexts for Art.
3. Of the units of credit obtained in courses approved for the BA degree (excluding those offered by the College of Fine Arts):
 - a) between 24 and 36 units of credit must be obtained in Level 1 courses, including no more than 12 Level 1 units of credit in any one sequence of study;

PROGRAM STRUCTURE: BARTH MARTADMIN FAST TRACK

		STAGE 1		STAGE 2		STAGE 3		STAGE 4		
		Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	
84UOC Major/Core made up of 60UOC in Undergraduate and 24UOC in Postgraduate courses										
C O R E	Barth MAJOR / MarAdmin CORE	SAHTT101 Mapping the Modern	6	SAHTT102 Mapping the Postmodern	6	Art Theory Major	6	Art Theory Major	6	
		SAHTT211 Theories of the Image	6	SAHTT212 Theories of Art History & Culture	6	Art Theory Major	6	Art Theory Major	6	
	72UOC Contextual Studies/Core Options made up of 24UOC Undergraduate and 48UOC Postgraduate courses								6	
	Barth CONTEXTUAL STUDIES / MarAdmin CORE OPTIONS	SAHTT221 Contexts for Art	6	Contextual Studies	6		Contextual Studies	6		
							Contextual Studies	6	Contextual Studies	6
24UOC Elective courses										
N O N - C O R E	OPEN ELECTIVES	Elective	6	Elective	6	Elective	6			
	12UOC General Education (to be completed before Stage 4)									
GENERAL EDUCATION				General Education x 2	6			General Education x 2	6	
192 Units of Credit			48		48		48		48	

PROGRAM STRUCTURE: 4806 BACHELOR OF ART THEORY BACHELOR OF ARTS

PROGRAM INFORMATION: 1800 BACHELOR OF ARTS THEORY OF ARTS															
STAGE 1				STAGE 2				STAGE 3				STAGE 4			
Session 1		UOC	Session 2	UOC	Session 1		UOC	Session 2		UOC	Session 1		UOC	Session 2	UOC
90uoc in College of Fine Arts Courses															
C O F A	ART THEORY			SAHT1101 Mapping the Modern	6	SAHT1102 Mapping the Postmodern	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6
				SAHT1211 Theories of the Image	6	SAHT1212 Theories of Art History & Culture	6	Contextual Studies	6	Contextual Studies	6	Contextual Studies	6	Contextual Studies	6
				84uoc in Faculty of Arts & Social Sciences Courses											
F A S S	ARTS			Arts Major (Level 1)	6	Arts Major (Level 1)	6	Arts Major (Upper Level)	6	Arts Major (Upper Level)	6	Arts Major (Upper Level)	6	Arts Major (Upper Level)	6
				Arts Non-Major (Level 1)	6	Arts Non-Major (Level 1)	6	Arts Non-Major (Upper Level)	6	Arts Elective	6	Arts Elective	6	Arts Elective	6
				18uoc in Open Electives											
O P E N	OPEN ELECTIVES									Elective	6			Elective	6
192 Units of Credit															
													48		
													48		

- b) no more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program;
- c) at least 18 units of credit must be obtained in Upper Level courses other than those taught by the school, department, unit or interdisciplinary program in which a major is being taken; and
- d) 42 units of credit must be obtained in one of the following major sequences within the Faculty of Arts and Social Sciences:

AUST Australian Studies
 CHIN Chinese Studies
 COMD Development Studies
 EDST Education
 ENGL English
 Environmental Studies
 EURO European Studies
 FREN French
 GERS German Studies
 GREK Greek
 HIST History
 HPSC History and Philosophy of Science
 INDO Indonesian Studies
 JAPN Japanese Studies
 KORE Korean Studies
 LING Linguistics
 MEFT Media, Culture and Technology/Film/Theatre and Performance Studies
 MUSC Music
 PECO Political Economy
 PHIL Philosophy
 POLS Politics and International Studies
 RUSS Russian Studies
 SLSP Policy Studies
 SOCA Sociology and Anthropology
 SPAN Spanish and Latin American Studies
 WOMS Women's and Gender Studies

4. No student may commence Upper Level subjects until 24 Level 1 units of credit have been successfully completed.
5. Students who satisfy the normal prerequisites for the BArtTh(Hons) or the BA(Hons) may qualify for Honours in either of these programs by completing an additional year of study (48 units of credit).
6. For eligibility for entry to the BArtTh(Hons) students must have achieved an average of 75% in 36 units of credit in the Art Theory major outside Stage 1.

4807 Bachelor of Art Theory Bachelor of Social Science

BArtTh BSocSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BArtTh BSocSc degree is the equivalent of four years of full-time study and enables students to combine the social science and policy studies available in the BSocSc with the study of the visual arts and culture, and art administration provided in the BArtTh. Graduates will be prepared for careers or postgraduate research studies in policy and administrative areas within the rapidly developing arts and culture industries. The professional contexts courses of the BArtTh and BSocSc will enable students to develop career-related skills and experiences, while the theoretical/historical contexts subjects in the BArtTh and the social science courses in the BSocSc will provide depth of knowledge about the arts and society.

Students undertaking this combined degree program complete the core requirements of both the Bachelor of Art Theory and the Bachelor of Social Science degrees, together with an approved major sequence.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in both Art Theory and Social Science.

Program Structure

Please refer to the 'Academic Rules' below for program requirements and structure.

For information on courses available within the Art Theory and Social Science components of this combined degree program, students may also wish to refer to the following program entries:

4803 Bachelor of Art Theory

3420 Bachelor of Social Science

Academic Rules

1. Students must complete a program of study carrying 192 units of credit of which:

- a) at least 90 units of credit must be obtained in courses offered by the College of Fine Arts;
- b) at least 90 units of credit must be obtained in courses offered by the Faculty of Arts and Social Sciences.

2. The BArtTh component of the combined degree must include:

- a) a major (60 units of credit) in Art & Design Theory, which must include the following Level 1 courses: SAHT1101 Mapping the Modern, SAHT1102 Mapping the Postmodern, SAHT1211 Theories of the Image and SAHT1212 Theories of Art History and Culture; and

- b) Contextual Studies (30 units of credit).

3. The BSocSc component of the combined degree must include:

- a) the following core courses of 48 units of credit in the BSocSc program:

SLSP1000	Social Science and Policy OR
SLSP1002	Introduction to Policy Analysis
SLSP1001	Research and Information Management
SLSP2000	Political Economy and the State
SLSP2001	Applied Social Research 1
SLSP2002	Policy Analysis Case Studies
SLSP3000	Social Theory and Policy Analysis
SLSP3001	Applied Social Research 2
SLSP3002	Social Science and Policy Project

- b) a major sequence in one of the following areas -

AUST Australian Studies
 COMD Development Studies
 ECON Economics/ Economic History
 Environmental Studies
 EURO European Studies
 GEOH/S Geography/ Geology
 HIST History
 HPSC History & Philosophy of Science
 MEFT Film/Theatre and Performance Studies
 MGMT International Business/ Industrial Relations/ Human Resources Management
 PECO Political Economy
 PHIL Philosophy
 POLS Politics and International Studies
 PSYC Psychology
 SOCA Sociology and Anthropology
 SPAN Spanish and Latin American Studies
 WOMS Women's and Gender Studies

4. Students who satisfy the normal prerequisites for the BArtTh(Hons) or the BSocSc(Hons) may qualify for Honours in either of these programs by completing an additional year of study (48 units of credit).

4703 Bachelor of Art Theory Bachelor of Laws BArtTh LLB

The course is a five year full-time degree leading to the award of the two degrees of Bachelor of Art Theory and Bachelor of Laws (BArtTh LLB).

The Program Authority for this combined program is the Faculty of Law.

For full details of this program, please refer to the Faculty of Law section in this Handbook.

4810 Bachelor of Digital Media

BDM

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

PROGRAM STRUCTURE: 4807 BACHELOR OF ART THEORY BACHELOR OF SOCIAL SCIENCE

90uoc in College of Fine Arts Courses											
STAGE 1			STAGE 2			STAGE 3			STAGE 4		
Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC
SAHT1101 Mapping the Modern	6	SAHT1102 Mapping the Postmodern	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6
SAHT1211 Theories of the Image	6	SAHT1212 Theories of Art History & Culture	6	SAHT1221 Contexts for Art	6		Contextual Studies	6	Contextual Studies	6	Contextual Studies
90uoc in Faculty of Arts & Social Sciences Courses											
Arts Major (Level One)	6	Arts Major (Level One)	6			Arts Major (Upper Level) x 2	12		Arts Major (Upper Level)	6	
SLSP1000 Social Science & Policy*	6	SLSP1001 Research & Info Management	6	SLSP2000 Political Economy & the State	6	SLSP2002 Policy Analysis Case Studies	6	SLSP3000 Social Theory & Policy Analysis	6		SLSP3002 Social Science & Policy Project
		SLSP1002 Introduction to Policy Analysis*	6	SLSP2001 Applied Social Research 1	6			SLSP3001 Applied Social Research 2			
12uoc open electives to bring program total to 192uoc											
Elective									Elective	6	Elective
192 Units of Credit											
48											

*Students take either SLSP1000 or SLSP1002 - if SLSP1002 is taken then two Arts Major (Level 1) courses should be taken in Session 1 and none in Session 2

PROGRAM STRUCTURE: 4703 BACHELOR OF ART THEORY BACHELOR OF LAWS																	
	STAGE 1		STAGE 2		STAGE 3		STAGE 4		STAGE 5								
	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC	Session 1	UOC	Session 2	UOC					
90UOC in College of Fine Arts Courses																	
C O F A	ART THEORY MAJOR	SAHTT101 Mapping the Modern	6	SAHTT102 Mapping the Postmodern	6	Art Theory Major	6	Art Theory Major	6	Art Theory Major	6						
		SAHTT211 Theories of the Image	6	SAHTT212 Theories of Art History & Culture	6	Art Theory Major	6										
		SAHTT221 Contexts for Art	6	Contextual Studies	6	Contextual Studies	6	Contextual Studies	6								
92UOC in Law Core Courses																	
L A W	LAW CORE	LAWS1052 Foundations of Law	6	LAWS1061 Torts	6	LAWS1001 Criminal Law 1	6	LAWS1011 Criminal Law 2	6	LAWS1081 Property, Equity & Trusts 1	6	LAWS1082 Property and Equity 2	6	LAWS2150 Federal Constitutional Law	6	LAWS2321 Litigation 2	6
						LAWS1071 Contracts 1	3	LAWS1072 Contracts 2	6	LAWS6210 Law, Lawyers & Society	6	LAWS2160 Administrative Law	6	LAWS2311 Litigation 1	6	LAWS4010 Business Associations 1	6
						LAWS2140 Public Law	3						LAWS7420 Advanced Legal Research	2	LAWS8320 Legal Theory or LAWS8820 Law & Social Theory	6	
58UOC in Law Elective Courses																	
ELECTIVES													Law Electives	10		Law Electives	24
240 Units of Credit																	
		48					48				48				48		48

PROGRAM STRUCTURE: 4810 BACHELOR OF DIGITAL MEDIA

PRO GRAM CURRICULUM: CO-MAJOR IN DIGITAL MEDIA MAJOR																
STAGE 1				STAGE 2				STAGE 3				HONOURS				
Session 1	uoc	Session 2	uoc	Session 1	uoc	Session 2	uoc	Session 1	uoc	Session 2	uoc	Session 1	uoc	Session 2	uoc	
78uoc Digital Media Major																
C O R E	M A J O R	SOMA1604 Introduction to Digital Media	6	SOMA1608 Digital Composite	6	SOMA2608 Digital Composite 2	6	SOMA3603 Digital Video 2	6	SOMA3610 Digital Studio	6	SOMA3612 Professional Portfolio	6	SART4044 Honours Studio Practice	18	
		SART1606 Drawing for Media	6	SOMA2602 Sound Media 1	6	SOMA2609 3D Modelling & Animation 1	6									
		SDES1601 Colour, Comp & Typography	6	SOMA1602 Web Authoring	6	SOMA2607 Multimedia Authoring 1	6									
						SOMA1603 Digital Video 1	6									
		30uoc Co-Major in Contextual Studies														
C O R E	C O N T E X T U A L S T U D I E S	SAHT1101 or SAHT1211 or SOMA1600	6	SAHT1102 Mapping the Postmodern	6			SAHT3614 Screen Culture	6	SAHT3613 Digital Theory and Aesthetics	6		SART4030 Honours Paper	6	6	
										SOMA3616 Professional Practice	6					
		24uoc Open Electives														
C O R E	O P E N E L E C T I V E S							Elective	6	Elective	6	Elective x 2	12			
		12uoc General Education														
								General Education x 2	6			General Education x 2	6			
		144 Units of Credit												48	48	48

Program Description

The Bachelor of Digital Media (BDM) is the equivalent of three years full-time study, designed to meet industry demand for creative practitioners and content developers who possess multiple skills and breadth of knowledge in interactive media, sound, web design, digital imaging, 3D modelling, animation, critical and creative thinking within the domain of digital media. The BDM offers students strong fundamentals combined with creative development and flexibility in the later stages of the program to shape the nature of their core studies.

Program Objectives and Learning Outcomes

The Bachelor of Digital Media aims to produce creative content developers with sound technical skills and the ability to work creatively and collaboratively across diverse media.

Graduates will be key players in the arts, digital media, entertainment and internet-based media with strengths in creative design and technical innovation.

Program Structure

The degree of Bachelor of Digital Media is awarded as a Pass degree at the completion of three years full-time study. An Honours degree is available through the completion of an additional year of study in the Honours program.

General Education Requirements

Students are required as part of their studies, to complete 12 units of credit in General Education courses or their equivalent. General Education courses, normally taken at Kensington campus, contribute to the broad educational objectives of the degree. No more than 3UOC may be taken from COFA General Education courses.

For further information on available courses, please refer to the General Education section in this Handbook.

Honours

BDM Honours is a program of higher level study available to BDM students who wish to undertake research in Digital Media, extending into an Honours fourth year. BDM students, after consultation with lecturers, should apply for entry to the program by the end of Session 4 but no later than Session 6. For entry to Honours, a student must have achieved a Distinction average in 48 units of core courses from Years 2 and 3.

In the Honours year, students undertake a research program in Digital Media. Each student is allocated a supervisor. Honours students are expected to perform at a satisfactory level throughout the program. The course is full-time. The body of work undertaken will be presented and assessed in exhibition form, accompanied by the presentation of a research paper relating to the student's studio practice.

Academic Rules

1. For the Pass degree, a student must complete and pass 144 units of credit.
2. A degree must contain a major in Digital Media defined as 78 units of credit in approved courses [see Digital Media Table A].
3. A student must complete 30 units of credit in courses approved as Digital Media Contextual Studies [see Digital Media Table B].
4. A student must complete 12 units of credit in General Education.
5. A student must complete 24 units of credit in electives.
6. No more than 60 units of credit in Level 1 courses will be counted toward the degree, with a minimum of 24 units of credit in Level 1 courses being successfully completed prior to undertaking Upper Level courses.
7. To be eligible to graduate with Honours, a student must complete all requirements of the Pass degree (see above) and complete an additional 48 units of credit over the equivalent of 1 year full-time.
 - a) Entry from completed 3rd year (without having graduated):
 - To be eligible for entry to Honours a student must have achieved a distinction average in 48UOC in Digital Media core courses in years two and three. Students will normally nominate at the end of year 2 but must nominate no later than the end of year 3, and must complete a course in research practices in art and design prior to entry to the Honours program.
 - b) Entry where candidate has graduated with a Pass-level degree:
 - Applicants with a degree of Bachelor at pass level (i.e. without Honours) may be permitted to enrol in Honours with credit for all

courses in the program prior to Honours. In this case applicants must satisfy the prerequisites for entry to the Honours or the equivalent of those prerequisites.

8. The Honours year consists of:

- a) an Honours Paper outlining studio research practice;
- b) Honours Studio Practice, which shall lead to an exhibition of work; and
- c) attendance at such seminars, lectures and classes as shall be required.

Honours is awarded in the following classes: Honours Class 1, Honours Class 2 Division 1 and Honours Class 2 Division 2. The class of Honours awarded shall be determined on the following weightings: Honours Studio Practice 75%, Honours Paper 25%. Honours is not awarded where the weighted mark is less than 65.

Digital Media Table A

SART1606	Drawing for Media	(6 UOC)
SDES1601	Colour, Composition and Typography	(6 UOC)
SOMA1602	Web Authoring	(6 UOC)
SOMA1603	Digital Video 1	(6 UOC)
SOMA1604	Introduction to Digital Media	(6 UOC)
SOMA1608	Digital Composite	(6 UOC)
SOMA2602	Sound Media 1	(6 UOC)
SOMA2607	Multimedia Authoring 1	(6 UOC)
SOMA2608	Digital Composite 2	(6 UOC)
SOMA2609	3D Modelling and Animation 1	(6 UOC)
SOMA3603	Digital Video 2	(6 UOC)
SOMA3610	Digital Studio	(6 UOC)
SOMA3612	Professional Portfolio	(6 UOC)

Digital Media Table B

SAHT1102	Mapping the Postmodern	(6 UOC)
SAHT3613	Digital Theory and Aesthetics	(6 UOC)
SAHT3614	Screen Culture	(6 UOC)
SOMA3616	Professional Practice	(6 UOC)
SAHT1101 OR SAHT1211 OR SOMA1600		(6 UOC)

Online Courses offered by COFA Online

COFA Online aims to offer quality and engaging fully online courses in art and design to students from all faculties at UNSW. This is made possible through courses offered at both general education and elective level. It is also possible that students from external universities and education institutions, both in Australia and overseas, to enrol and take part in these courses. Students who enrol in online courses are contacted via their UNSW email accounts with all administrative details for the courses they have chosen.

New online courses are added each session, so please check the COFA Online website for updates on new course offerings: www.cofa.unsw.edu.au/online

COFA Online General Education

GEND0201	Graphics and Contemporary Society
GEND0202	Art & Cultures: The Language of Interactivity
GEND0204	Seeing Light as a Design Tool
GEND0205	Curating Art and Exhibitions
GEND0206	The Art of Plants and Nature
GEND0207	Textiles - Technology and Tradition
GEND0208	Fashion 1980 - Now
GEND0209	Cross Cultural Sculpture
GEND0210	Visual Identity in the Built Environment
GEND0211	Print Advertising for a World Market
GEND0212	Textiles for Interiors - Senses and Spaces
GEND0213	Contemporary Aesthetics in Digital Architecture
GEND0214	Creative Thinking Processes
GEND0216	Celebrity and the Face in Australian Cinema
GEND0217	The Art of Scientific Visualisation
GEND0218	Experiencing and Contemplating Art

COFA Online Electives

COFA0201	Graphics, Global Communication and Society
COFA0202	Collaboration & Play in Interactive Design
COFA0203	Collaboration & Visual Communication in Graphic Design
COFA0207	Textile Design: Tradition & Contemporary Technology
COFA0208	Fashion in Contemporary Culture
COFA0209	Cross Cultural Installation Art
COFA0210	Spatial Branding

Elective Courses for Undergraduate Programs

Students may choose electives from the courses listed below that are offered by the College of Fine Arts. It is also possible to choose electives from other faculties of the University. All other courses (i.e. core courses of degrees) offered at the College of Fine Arts may be available to be undertaken as electives as well. Advice should be sought from the relevant Program Authority if you wish to take courses that are not listed in this section of the Handbook as electives.

Timetable constraints and availability of staff do not allow all courses to be offered every year, although endeavours are made to offer the full range over a 3 year period.

Please note that same courses have prerequisites and/or need to be completed in sequential order (i.e. SOMA3615 Sound Media 2 must be completed before SOMA3551 Sound Media 3).

Art Education Electives

Contexts and Diversity

SAED2474	Art Education and the Primary School
SAED2475	Multicultural Contexts
SAED2477	Art Education and the Environment
SAED2478	Art Education and Aboriginal Studies
SAED2479	Dialogues and Communities
SAED2480	The Art Museum and Art Education

Media and Communications

SAED2481	Media and Communication Contexts for Art and Design
SAED4471	Visual Arts Workshop 2

Politics, Practices and Education

SAED2471	Histories of Australian Education
SAED2472	Creativity in Art and Design Education
SAED2473	Seminar in Art Education
SAED4472	Independent Study in Art, Design and Education
SAED4473	Politics and Identity in Art and Design Education
SAED4474	Dilemmas of Praxis: The State, the School and the Educator

Art History And Theory Electives

The Western Tradition

SAHT1211	Theories of the Image
SAHT2211	Eurocentred Visions: Grand Narratives in Western Art
SAHT2224	Art and Biogenetics: Breeding the Body Beautiful
SAHT2601	The Art of Ancient Cultures
SAHT2606	The Painting of Modern Life: French and English Painting in Focus
SAHT2612	Art and Its Others: Interdisciplinarity in Contemporary Art
SAHT3211	Art After Postmodernism

Australian Art History

SAHT2214	Approaches to Australian Art

Cross Cultural Studies

SAHT2212	Art and Cultural Difference
SAHT2633	Peripheral Visions: Perspectives of Colonial and Post Colonial Art

Critical and Cultural Theory

SAHT2222	Memory and Self
SAHT2227	Fashion History and Theory
SAHT2641	Modern Aesthetics: From the Enlightenment to the 21 st Century
SAHT2642	Art, Gender, Sexuality and the Body
SAHT2643	Pornography, Art and Politics
SAHT3212	Art and Everyday Life
SAHT3213	Museum Studies: Exhibitions, Collections and Material Culture

Media Studies

SAHT2649	Creative Writing for Artists
SAHT2661	Experimental Film and Video since the 1960s
SAHT2663	Avant-Garde Cinema: 1900-1950
SAHT2667	After Modern Sculpture: Installation, Structures and Spaces
SAHT2674	A History of Drawing
SAHT3613	Digital Theory and Aesthetics
SAHT3614	Screen Culture
SAHT3669	Critical Theories of Photography

Special themes and projects

For further information, see Head of School, Art History and Theory

SAHT3690	Special Project

Design Studies Electives

Ceramics

SDES1155	Introduction to the Ceramics Studio
SDES2140	Clay, Glaze and Firing Technology
SDES2141	Moulding and Casting in Clay
SDES2142	Drawing, Photographic and Print Techniques on Clay
SDES2143	Self-sufficient Studio Processes and Firing
SDES2187	The Contemporary Vessel, I
SDES2188	Wheel Throwing in Contemporary Ceramic Practice
SDES3162	Non-Functional Ceramics

Textiles

SDES1144	Textile Processes
SDES2167	Textiles for Fashion
SDES2168	Commercial Textile Design
SDES2184	Textiles: Woven Forms
SDES2185	Textiles: Fabric Manipulation
SDES2213	Digital Textiles
SDES2214	Art and Fashion
SDES3169	Textiles: New Technology
SDES3170	Textiles: Nylon to Now
SDES3186	Textiles: Surface Design

Jewellery

SDES1154	Introduction to the Jewellery Studio
SDES2147	Jewellery Materials and Technologies
SDES2149	Metal Casting for Jewellery and Small Scale Objects
SDES2150	Jewellery Processes for Multiple Production
SDES2151	Surface Investigations in Jewellery Design
SDES2152	Jewellery Workshop in Colour
SDES2153	Jewellery Experiments with Emerging Technology
SDES2163	Contemporary Wearables
SDES2164	Jewellery and Small Scale Object Design
SDES3165	The Replicated Object - Jewellery Multiples
SDES3166	Jewellery Design for Fashion

Graphics

SDES2198	Advanced Typography and Publication Design
SDES2199	Propaganda and Advertising

Professional Practice

SDES2171	Design Management Elective – Brand and Identity

Digital Design

SDES3171	Introduction to Motion Graphics Design
SDES3172	Digital Design - Interactive Design
SDES3174	Digital Design - Web Design and Screen Interface
SDES3176	Digital and Pre-press Design
SDES3177	3D CAD Object and Space
SDES3179	Digital Design - Introduction to Flash Design

Performance/Theatre

SDES2174	Fashion and Costume Design 1
SDES2177	Design in Performance
SDES2179	Design in the Theatre
SDES3175	Fashion and Costume Design 2

Independent Study

SDES2170	Rendering and Illustration for Designers
SDES2178	Independent Study
SDES3178	Independent Study 2

Fine Arts Electives

Drawing

SART1501	Painting
SART1502	Drawing
SART2501	Life Painting
SART2502	Advanced Drawing
SART2829	Anatomy for Artists
SART2832	Life Drawing
SART2833	Figurative Composition in Painting
SART2834	Experimentation in Mixed Media
SART2835	Composition and Design
SART2836	Colour
SART2845	Drawing/Painting Field Studies
SART2848	Advanced Drawing/Painting Field Studies

- SART2859 Abstraction for Drawing and Painting
 SART3501 Advanced Life Painting
 SART3860 Approaches to Digital Outputting for Artists

Printmaking

- SART1361 Etching
 SART1581 Screen Printing
 SART1591 Printmaking
 SART2361 Advanced Etching
 SART2581 Advanced Screen Printing
 SART2591 Advanced Printmaking
 SART2818 Custom Printing
 SART2819 Advanced Custom Printing
 SART2828 Artists' Books
 SART2849 Alternative Printmaking
 SART2851 Print as Object
 SART2856 Digital Printmaking

Sculpture, Performance and Installation

- SART1601 Sculpture
 SART1621 Installation
 SART2601 Advanced Sculpture
 SART2621 Advanced Installation
 SART2827 Sculpture Field Studies
 SART2841 Electronic Technologies
 SART2842 Metal Casting
 SART2846 Figurative Sculpture
 SART3801 Special Projects - Studio
 SART3862 Ceramic Shell Casting
 SART3863 Installation and Electronic Art
 SART3864 Advanced Electronics

Media Arts Electives**Digital Media**

- SOMA1810 Introduction to Computing
 SOMA2551 Introduction to Audio
 SOMA2606 Advanced Multimedia Authoring
 SOMA2610 Writing for Digital Media
 SOMA2814 Cinematography

- SOMA2858 Narrative and Gameplay
 SOMA2859 Video Production Studio
 SOMA3551 Sound Media 3
 SOMA3608 Digital Composite 3
 SOMA3609 3D Modelling and Animation 2
 SOMA3615 Sound Media 2
 SOMA4609 3D Modelling and Animation 3

Photomedia

- SOMA1521 Introduction to Analogue Photography
 SOMA2521 Introduction to Studio Lighting
 SOMA2814 Cinematography
 SOMA2815 Introduction to Digital Imaging
 SOMA2854 Vector Graphics in Visual Arts
 SOMA3521 Advanced Analogue Photography
 SOMA3858 Advanced Studio Lighting
 SOMA3860 Advanced Digital and Web Media

Time Based Art

- SOMA1641 Video Art
 SOMA1651 Introductory Analogue and Digital Animation and Timing Skills
 SOMA1661 Performance
 SOMA1681 Introductory Multimedia Computing
 SOMA2201 Landscape Animation
 SOMA2651 Advanced Analogue and Digital Animation
 SOMA2681 Advanced Multimedia Computing
 SOMA2814 Cinematography

COFA Online Electives

- COFA0201 Graphics, Global Communication and Society
 COFA0202 Collaboration & Play in Interactive Design
 COFA0203 Collaboration & Visual Communication in Graphic Design
 COFA0207 Textile Design: Tradition & Contemporary Technology
 COFA0208 Fashion in Contemporary Culture
 COFA0209 Cross Cultural Installation Art
 COFA0210 Spatial Branding

Faculty of Commerce and Economics

A Message from the Dean

Welcome to the Faculty of Commerce and Economics at the University of New South Wales – one of Australia's leading universities.

After fifty years of dynamic growth, UNSW has a reputation for excellence, sustained innovation, scholarship, research and practical application; and the Faculty of Commerce and Economics plays an important role in maintaining this reputation.

The Faculty attracts high-achieving students from across the region, with strength, depth and quality across eight teaching and research units. Through excellence in scholarship we aim to enhance the capability of our students and staff to add value to the organisations, professions and communities in which they aspire to leadership roles.

The Faculty values its close relationships with industry and the professions, ensuring a high demand for our graduates, many of whom are now leaders in industry, government, politics and academia.

The Faculty is committed to supporting its students throughout their learning experience. We have a wide range of support services, including an Educational Development Unit, a Faculty Student Centre to assist with administrative matters, and Undergraduate and Postgraduate Advisors in each school. Together we aim to offer you a rewarding and stimulating environment in which to pursue your studies. I wish you every success.

Greg Whittred

Dean

Faculty of Commerce and Economics

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Faculty Information and Assistance

Who Can Help?

If you require advice about enrolment, degree requirements, progression within programs or any other general matters, contact the Faculty of Commerce and Economics Student Centre, Ground Floor, John Goodsell Building: telephone (02) 9385 3187, fax (02) 9313 7767, email ugfce@unsw.edu.au.

Office Hours:

During Orientation week, Week 1 and Week 2 of session:

Monday – Thursday 9.00am – 6.30pm

Friday 9.00am – 5.00 pm

Other weeks:

Monday – Friday 9.00am – 5.00pm

For specific information and advice about academic course content, contact the appropriate schools/teaching units.

The Faculty of Commerce and Economics Website

Please refer to the Faculty website for further information:
www.fce.unsw.edu.au

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

Computer Information

The Faculty has a number of laboratories located in the Quadrangle and John Goodsell Buildings, all of which are equipped with Pentium machines. More detailed information is available in the Faculty 'Student IT Resource Handbook' or on the Faculty website.

Education Development Unit

In pursuit of the FCE's vision to be the leading business faculty in the Asian region, the Education Development Unit (EDU) provides support, development and leadership for both staff and students in the area of education quality and innovation.

The EDU supports all FCE students in the development and enhancement of their academic skills, by providing a range of strategies including:

- Transition program - Prior to commencement of studies, a one-day program is offered to all FCE undergraduate students to prepare them for the first important weeks at university by developing knowledge of individual learning styles and deeper learning approaches to academic subjects.
- Orientation programs – Offered for both undergraduate and postgraduate programs, orientation introduces students to teaching and learning approaches, learning expectations, strategies for successful study in the Faculty and provides opportunities to meet Faculty staff and students.
- Discipline-specific resources and activities – The EDU works with academic staff from different disciplines to develop workshops and resources relevant to specific disciplines.
- Academic skills workshops – Provided throughout each session, these workshops are free and specifically for FCE students. Topics include referencing, reading critically, essay and report writing, case analysis, presentation skills, working in groups, and exam preparation.
- Resources and handouts – Available both in print and online, resources include handouts on academic skills and a range of other topics for FCE students.
- Consultations – Confidential individual or small group consultations regarding any learning issues are offered to all FCE students.

FCE students visiting the EDU may wish to talk to staff about their learning, their language needs and improving their academic performance. Students can collect or borrow appropriate support materials, find out about workshops or make appointments for a one-hour consultation.

For further information, visit the EDU website at <http://education.fce.unsw.edu.au>, or drop in at the EDU Learning Assistance Centre, Room 2039, level 2, South Wing, Quadrangle Building or phone: (02) 9385 5584.

Assumed Knowledge

The Bachelor of Commerce, Bachelor of Commerce in Marketing, Tourism and Hospitality Management, Bachelor of Economics, Bachelor of Science in Information Systems, Bachelor of Science in Business Information Technology and all combined programs offered by the Faculty assume students to have achieved a prescribed standard in Mathematics at the Higher School Certificate or equivalent. More details are available from the Admissions Office.

Course Timetables

Undergraduate course timetables are available to re-enrolling students via the Faculty website before the end of the current year of study. New undergraduate students are allocated individual course timetables for their first session enrolment at the time of enrolling.

Enrolment Procedures

Interested applicants to the Faculty of Commerce and Economics should contact the Faculty of Commerce and Economics Student Centre or the Admissions Office.

New students are informed of enrolment procedures after they have received an offer.

All re-enrolling UNSW students are emailed information with regards to enrolment appointments to enable them to enrol online using myUNSW.

Examinations

Additional information on examinations and assessment, rules and restrictions, is included in the front of this Handbook.

For courses under the control of the various schools in FCE, the published grade will be determined on the basis of a composite mark which will include, on a weighted basis, the results of the final examination, other prescribed examinations, essays and assignments. The exact method of weighting the components of the composite mark may differ from course to course, but students are advised of the weighting at the commencement of each session.

Supplementary Examinations

Students may be required to sit for an oral and/or written supplementary examination, which will normally be held in the two weeks preceding the commencement of Session 2 or in December/January. In general, this opportunity will only be offered to a student who has been prevented from taking an end of session examination or who has been placed at a serious disadvantage during the examination and whose circumstances have improved considerably in the period since the examination was held.

Students are advised not to undertake programs with which they cannot cope adequately and re-enrolling students are encouraged to seek the advice of enrolling officers in the faculty on this matter.

Use of Calculators

The Faculty of Commerce and Economics has resolved to advise all students to equip themselves with a portable electronic calculator, preferably one which possesses, in addition to the four basic arithmetic functions, those involving discounting and present value calculations.

These calculators should be a valuable study aid in expediting the routine aspects of assigned practical exercises throughout the year in many courses. Such calculators may also be permitted, subject to the discretion of individual examiners, in examinations for courses taught in the Faculty.

Schools and Disciplines

The Faculty of Commerce and Economics includes the Schools of Accounting, Actuarial Studies, Banking and Finance, Business Law and Taxation, Economics, Organisation and Management, Information Systems, Technology and Management, and Marketing.

School of Accounting

Head of School: Professor Wai Fong Chua

Administrative Officer: Colin Withers

Accounting is concerned with the provision of information for the management of economic resources and activities by means of measurement, communication and interpretation of financial data; with the development of information systems; and with the financial accountability and management of business and public enterprises. By economic resources, we mean both tangible and intangible resources.

Accounting information is increasingly used to manage intangible resources such as an organisation's knowledge base, its supplier/customer relationships, its brands etc.

Accounting lies at the head of economic exchange, whether conducted in physical or electronic markets. It enables students to comprehend many of the fundamental principles, processes and outcomes of business, thereby equipping students for a wide range of careers in businesses (from chartered accounting, management consulting, provision of financial services to general management). Graduates are employed not only as accountants, but also as entrepreneurs, entertainment promoters, treasurers, chief financial officers, etc.

The School of Accounting offers undergraduate programs leading to a Bachelor of Commerce with either a single major in Accounting (8 accounting courses) or a double major (7 accounting courses). The most popular double majors are with Finance, Information Systems, Business Law and Taxation.

The School of Accounting at UNSW is internationally renowned for its innovative and high-quality teaching at both undergraduate and graduate levels. Our teachers have won national teaching awards as well as Vice-Chancellor Teaching Awards. Classes involve students in an interactive and thought-provoking learning environment. We also increasingly use the web as a learning tool and our courses are constantly revised to meet new challenges in a globalised and digitised world. We expose our students to e-business, encourage them to understand the links between business strategy and processes, offer advanced courses in assurance and business risk, and help them appreciate global influences on financial reporting and management.

Actuarial Studies

Head: Professor Michael Sherris

Administrative Assistant: Bindya Subba

Actuarial Studies involve the application of quantitative, economic and financial models and analysis to long term financial management particularly in life insurance, general insurance, health insurance and superannuation, as well as in other financial services. The actuarial courses cover the models used to quantify and manage risks such as survival, birth, marriage, sickness, retirement, accident, fire, flood, asset default and asset value fluctuations and to study their financial effect on the obligations of insurance companies, benefit plans and other financial security systems. The courses provide the foundations for actuarial practice in the pricing, reserving, investment, and financial management of life insurance, general insurance superannuation and pension funds. The actuarial program of study also aims to develop the use of judgement and to provide the necessary combination of mathematical, statistical, accounting, economic, financial, demographic, analytical and modelling skills for a rewarding career in the financial services industry.

The Bachelor of Commerce allows students to combine a major in Actuarial Studies with a major or minor in a broad range of other disciplines including business economics, business statistics, business strategy and economic management, economic history, financial economics, human resource management, management, taxation, modern languages, accounting, finance, international business, business law, information systems, marketing, and industrial relations. The Actuarial Studies program also provides students who meet the required standards with the opportunity to apply for exemptions from some or all of the Part I examinations of the Institute of Actuaries of Australia and entry into the actuarial profession. The Actuarial Studies Co-op Scholarship Program provides industry experience integrated with the academic requirements for the Bachelor of Commerce.

The courses are quantitative and intellectually demanding. They require a very strong ability and interest in mathematics and statistics and their applications to business. Success as a professional actuary also requires problem solving skills, reasoning, well-rounded business skills and an ability to communicate complex ideas in simple terms.

Actuaries are employed by insurance companies, superannuation funds, banks, and governments and also practise as consulting actuaries. The financial rewards from an actuarial career compare very well with other professions and employment prospects are very good. To qualify as an actuary in Australia requires the completion of, or exemption from, subjects in Parts I, II and III of the professional syllabus of the Institute of Actuaries of Australia.

Part II is studied after graduating or possibly in an Honours year and is made up of the Actuarial Control Cycle subjects. Part III consists of four half-year subjects completed by distance education through the Institute of Actuaries of Australia usually on a part time basis after completing the Part I and II subjects.

Please refer to the section 'Professional Recognition of Programs' for a sample program.

School of Banking and Finance

Head of School: Professor Terry Walter

Administrative Assistant: Rebecca Archer

Administrative Officers: Stephanie Osborne and Shirley Webster

Finance is the study of financial and capital markets. It is concerned with decision making within those markets, and how values or prices of financial assets are determined. Finance is also concerned with investment decisions (e.g. selection among alternative projects, selection of securities to include in a portfolio), financing decisions of a firm (dividend policy, debt and equity structures, and lease purchase decisions), and the development of risk-hedging strategies so as to minimise the damaging effects of adverse movements in share prices, interest rates, exchange rates, and other uncertainties in domestic and international financial markets.

Global financial market integration has led to the emergence of multinational corporations. Financial management of multinational corporations and the study of these corporations' financial and investment strategies in the international market, particularly in the Asia-Pacific region, are also a focus of the program in finance. Furthermore, the increasing expansion of insurance services and funds management in Australia and this region are other important issues in finance.

The growth of interest towards the financial sector has been accredited to greater public awareness of the financial market as an investment opportunity. The public at large have taken to purchasing stocks and bonds as a means of securing higher returns, and with it a greater degree of consumer awareness towards financial matters has developed. One major growth area in the world of finance is the advent and expansion of funds management. Funds managers pool investor money together to form specific portfolios to suit different investor needs. For example, some investors prefer high capital gains over short time horizons, whilst others prefer not to take as much risk and hope for a steady stream of income over a longer period of time. Funds managers must understand the needs of the customer, design portfolios consisting of different assets to suit those needs, and ensure the returns from the funds are what is expected of them. The funds management, international finance, corporate finance and banking courses offered in the School of Banking and Finance provide the basis for a graduate to enter this growing and complex market, with the necessary skills and knowledge to advance rapidly within the industry.

A student may specialise in finance or combine finance with other disciplines of the faculty, or combine finance with mathematics or law. Depending on the program selected, finance provides training for a wide range of vocations including: multinational financial managers; multinational bank and insurance managers; multinational funds managers; venture capital and private equity specialists; corporate financial managers or treasurers; portfolio managers for trust funds; superannuation funds and insurance companies; investment analysts and financial researchers in stockbroking firms; investment banks; trading banks and government departments; management consultants and takeover specialists in corporate advisory divisions of merchant banks; public accounting firms; and management consulting firms.

Co-op Scholarships

The Co-op Program offers four-year scholarship programs in Finance Honours. The Finance Honours program includes a total of fifteen months industrial training. Entry is gained through the Co-op selection process.

For further details on Co-op scholarships, see your high school careers advisor or contact the UNSW Co-op Program Office, telephone (02) 9385 5116, website: www.co-op.unsw.edu.au

School of Business Law and Taxation

Head of School: Professor Andrew Terry

Administrative Assistant: Bibi Moore

Law and commerce are inextricably intertwined. The entire fabric of commerce is woven from a complex legal regime, judicial and statutory, which regulates all commercial activity. The study of commerce has always included an examination of the laws which govern its operation and it is the role of the School of Business Law and Taxation to provide a range of courses addressing areas of law relevant to students in the Faculty of Commerce and Economics.

The courses offered by the School fall into three broad categories: 'foundation' courses which expose students from all disciplines in the faculty to a broad general education in the legal environment and regulation of commerce; 'professional' courses which are recognised by the CPA Australia and the Institute of Chartered Accountants in Australia

for admission to those bodies; and 'specialist' business law and taxation courses relevant to disciplinary streams within the Faculty.

The School's mission is different to that of a law school – it is driven by an audience which is trained for commercial rather than legal practice. The School's focus is on teaching and research which is contemporary, relevant and innovative, and which adds value to the disparate disciplines which comprise 'commerce'.

At the undergraduate level, the School offers co-majors in **Business Law** and in **Taxation**.

School of Economics

Head of School: Professor William Schworm

Administrative Officers: Clea Bye, Nadine Caisley, Jenny Reeks and Catriona Reid

The School of Economics offers full-time and part-time courses leading to the degrees of Bachelor of Commerce and Bachelor of Economics with specialisations in economics, econometrics, economic history, financial economics, business strategy & economic management, business statistics and business economics.

The School undertakes the majority of teaching in the Bachelor of Economics program and an important part of the Bachelor of Commerce core. The study of economics, as part of the BCom degree, has built up a reputation of combining an excellent academic standard with practicality and flexibility. Our offerings in the BCom give students the utmost amount of choice so they can select options that complement their career paths. Students can proceed with a minor or single major in business strategy & economic management, financial economics, business economics, business statistics or economic history, or they may combine two of these as a double major or any one with other disciplines of the faculty as a double major.

The Bachelor of Economics program gives a solid grounding in economic analysis and quantitative techniques. It allows students to do a single major in economics, econometrics, economic history or financial economics or any of these may be combined with each other or other disciplines of the faculty as a double major.

The core requirements of the Bachelor of Economics program comprise three years of training in modern economic analysis, instruction in quantitative methods and techniques, an in-depth analysis of economics or econometrics and, in most cases, some exposure to economic history. The specialisation in economics provides a basic training in economics which is suitable for a wide range of careers in the private and public sectors of the economy.

In both the Bachelor of Economics and the economics specialisations in the Bachelor of Commerce, students who have a good academic record are encouraged to apply for enrolment in the Honours program. This requires an additional year of study. Students who wish to become professional economists, econometricians or economic historians are strongly advised to take the Honours course. Potential Honours students should discuss this option with the Honours Coordinator at the School of Economics.

School of Information Systems, Technology and Management

Head of School: Professor Graham Low

Administrative Officers: Tricia Hartley

Information Systems (IS) involves the planning, analysis, design and maintenance of computerised systems used to process information in commerce, industry, government and research organisations. Information Technology (IT) is the underlying mechanism that controls these systems. Information Systems and Information Technology are indispensable to the operations of most modern organisations. In an information systems course, you will study how information systems are planned, analysed, designed, operated and managed. Throughout the program you will develop conceptual and practical skills relating to the way in which computer systems are used within organisations.

Graduates often follow careers as programmers, analysts, business analysts, information technology specialists, data administrators, EDP auditors, e-commerce specialists and web managers.

Degrees offered by the School of Information Systems, Technology and Management:

1. Bachelor of Commerce majoring in Information Systems (program 3502, plan code **INFSA13502**): This degree is tailored for those more interested in IS and management aspects of the discipline. With this degree you can combine IS and another Commerce discipline such as accounting, marketing, actuarial studies or finance. Note that transfers

are possible at the School's discretion to or from the Co-op scholarship program (ISM) as defined below.

2. Bachelor of Science in Information Systems (program 3979): This program is designed for those more interested in the use and application of IS and IT in a commercial environment. The program is structured and includes courses from many disciplines including Information Systems, Information Technology and Management, Computer Science, Mathematics, as well as Commerce and Economics courses. Note that transfers are possible at the school's discretion to or from the Co-op scholarship program (BIT) as defined below.

Co-op Scholarships

The UNSW Co-op Program offers four-year scholarship programs in Information Systems and Information Technology. These programs include three six-month industrial training periods. Entry is gained through the scholarship selection process.

3. Bachelor of Commerce majoring in Information Systems and Management (program 3502, plan code **INFSF13502**). ISM is a generalist business degree that concentrates on the application of IS to business management and decision-making. In addition to completing a major study in the discipline of Information Systems, a minor may be chosen from a number of offerings in the Faculty of Commerce and Economics.

4. Bachelor of Science majoring in Business Information Technology (program 3971). BIT focuses on technical knowledge and theory for the application of IT and IS in a commercial environment. The program is structured and includes courses from many disciplines including Information Systems, Information Technology and Management, Computer Science, Mathematics, as well as Commerce and Economics courses.

For further details on Co-op scholarships see your high school careers advisor or contact the UNSW Co-op Program Office, telephone (02) 9385 5116, website: www.co-op.web.unsw.edu.au/

School of Marketing

Head of School: Professor Paul Patterson

Administrative Officer: Nadia Withers

Marketing is a dynamic management discipline concerned with exchange processes in competitive markets. It is of critical importance in all sectors of the economy, including local and international businesses and profit-making and non-profit making organisations. The business function of marketing seeks to identify the needs and wants of customers, determine potential target markets, design appropriate products and services, develop pricing strategies, communicate this offering to customers and distribute it to the marketplace. A wider goal of marketing is to create an organisation-wide ethos that is responsive to customer needs, aware of competitive forces and builds on core strengths of the organisation.

Graduates find careers in product and brand management, service quality management, new product planning, international marketing, logistics and distribution, sales and purchasing, advertising, direct marketing and public relations, marketing research, management consultancy and e-business. General management training programs are also a popular option. Graduates find their skills are in heavy demand across both public and private sectors, nationally and internationally. Professional accreditation has been given to graduates of our programs by the Australian Market and Social Research Society. There are also affiliations with professional organisations such as the Advertising Federation of Australia, the Australian Marketing Institute, the Australian Direct Marketing Association and the Australian Customer Service Association.

Undergraduate Marketing: The School of Marketing offers undergraduate programs leading to the award of the degree of Bachelor of Commerce and Bachelor of Economics. An intellectually rigorous approach is combined with a desire for practical relevance. This entails drawing not only on the general field of marketing but also the related disciplines of economics, finance, psychology, sociology, business law, and statistics. Relevance is achieved through case studies, applied exercises and the business experience of teaching staff. The Honours year deals with more advanced themes in marketing and students are required to submit a well-researched thesis.

Undergraduate Services Marketing – Tourism and Hospitality: A specialist four-year undergraduate degree program in Services Marketing - Tourism and Hospitality is available within the School. This program adds tourism and hospitality management courses to the full range of marketing courses but with a broader service industry focus. These additional courses include tourism policy and planning, human resource management, tourism and hospitality law, entrepreneurship in services, services marketing and facilities management for hotels, resorts and restaurants. Students receive practical training at an approved training college and are required

to complete at least 250 hours of industry work experience as part of the program, adding to the richness of the degree. Graduates will find careers in a range of service industries including major hotels, resorts, airlines and tourism, both in general management as well as in marketing.

The Centre for Applied Marketing (CAM): The Centre for Applied Marketing is a joint research centre between the School of Marketing, Faculty of Commerce and Economics and the Marketing cluster at the Australian Graduate School of Management. The Centre was established to act as a bridge with Australian industry. The Centre promotes and undertakes both pure and applied research in a range of marketing spheres. The Centre also provides customised in-house marketing training programs to leading Australian companies.

The Sustainable Tourism Cooperative Research Centre (STCRC): This is a national research body which brings together federal and state governments, the travel and tourism industry, and sixteen (16) Australian universities. STCRC provides funding for research on impacts, management and future directions for tourism. The research ranges across economic, environmental, social, marketing and policy aspects of tourism. One of the three major STCRC research themes, the "Sustainable Destinations" Program, is coordinated from UNSW.

School of Organisation and Management

Head of School: Associate Professor Lucy Taksa

Administrative Officer: Terry O'Callaghan

The School of Organisation and Management was formed on 1 July 2004 by the merger of the School of Industrial Relations and Organisational Behaviour and the School of International Business. Consequently course codes which previously started with IROB and IBUS are now under the MGMT prefix.

The school offers three distinct disciplinary streams to Honours level: Human Resource Management, International Business and Industrial Relations. It also offers a disciplinary stream in Management.

The specialisation in **Human Resource Management** provides a strong applied and theoretical grounding in all aspects of the management of people in paid employment. The School's programs are designed to provide both the breadth required for successful career mobility in the 'HR' field and the opportunity to acquire advanced, applied knowledge in specialised human resource functions, including staff planning, recruitment, selection and development, training, gender equity, employee motivation and performance management, remuneration management, superannuation, employment law, workplace negotiation, international and cross-cultural human resource management, and occupational health and safety. These areas are increasingly being influenced by wider corporate strategy and business plans and are often seen as the key to enhancing organisational performance. Accordingly, the School's programs place a strong emphasis on the strategic aspects and importance of human resource planning, policy and practice. The program in Human Resource Management provides a solid career basis for those involved in, or contemplating becoming involved in, managing people in paid employment.

The **Industrial Relations** program focuses on the processes, relationships, institutions and public policies associated with paid employment in contemporary society. As well as equipping students with a solid working knowledge of all key institutional players, namely trade unions, management, employer organisations and industrial tribunals and government, 'IR' courses are designed to furnish a detailed and practical understanding of current employment relations issues, developments and practices. The specialisation in Industrial Relations provides knowledge and skills suitable for a wide range of careers in employment relations areas, such as industrial advocacy or research with trade unions and employer organisations, as well as careers as industrial relations or labour policy specialists with government bodies and international labour organisations. Recent changes to industrial relations policies, including a growing focus on the 'micro' or workplace issues, have increased the demand for industrial relations expertise at all levels of corporate management.

International Business is a rapidly growing field of study dealing with the development, strategy, and management of multinational enterprises in the global context of complex and dynamic business environments. Besides the study of multinational enterprises, the field necessarily includes business context studies and culture and communications, including language studies. Doing business and making decisions internationally involves greater complexity and is much more challenging compared to decision making restricted to the domestic context. Special knowledge and skills are required to be successful at international business. Strategic decisions have to be made about which countries to

operate in and whether or not to export or license, whether to set up a new facility, establish a joint venture or acquire an existing business and how to sustain competitiveness internationally. Critical issues requiring analysis and judgement at the international level include global strategy, country risk, business negotiations, cultural difference, and performance measurement and evaluation

The **Management** specialisation examines the processes, conceptual expertise and work functions involved in managing people and organisations effectively. Broadly, management is concerned with building and developing relationships between people and organisations, formulating goals, designing organisational structures, fostering innovation, controlling resources and facilitating productive activities. Rather than focusing purely on the tasks, roles or functions of managers, this specialisation examines the complex relations between power, people and resources that are the key challenges to effective management. Theories and predictions concerning new organisational forms, future business trends, international strategy, and more effective management practices are studied in addition to established knowledge in the discipline. The overall objective is to equip future managers to apply knowledge and skill effectively to the complex problems facing organisations in today's dynamic global environment.

Professional Recognition of Programs

The degree programs offered by the Faculty of Commerce and Economics are recognised by professional organisations in accordance with the details set out below. If you are unable to fit these courses in as part of your degree requirements, you may have to enrol in additional classes on a non-award basis.

Australian Computer Society (ACS)

The School of Information Systems, Technology and Management programs are accredited by the Australian Computer Society (www.acs.org.au).

Programs accredited to the level of Professional by the Australian Computer Society:

Bachelor of Commerce (Information Systems) including Honours and combined degrees
 Bachelor of Commerce (Information Systems and Management) including Honours and combined degrees
 Bachelor of Science (Information Systems) including Honours and combined degrees
 Bachelor of Science (Business Information Technology) including Honours and combined degrees

Bachelor of Commerce (Information Systems)

The basis of accreditation is:

Satisfactory completion of the following core courses:

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks

and:

Satisfactory completion of at least another 24 units of credit in level 2 or 3 courses in Information Systems with a minimum of 12 units of credit at level 3.

Satisfying the full requirements for completion of the program.

Bachelor of Commerce (Information Systems and Management)

The basis of accreditation is:

Satisfactory completion of the following core courses:

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks
INFS2791	Industrial Training A
INFS3792	Industrial Training B
INFS4793	Industrial Training C
INFS3604	Information Technology Management

and:

Satisfactory completion of at least another 12 units of credit in Information Systems courses at Honours level.

Satisfactory completion of at least another 18 units of credit in level 3 or 4 courses in Information Systems.

Satisfying the full requirements for completion of the program.

Bachelor of Science (Information Systems)

The basis of accreditation is:

Satisfactory completion of the following core courses:

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks
INFS2609	Software Implementation
INFS3605	Implementation Workshop
INFS3606	Telecommunications for Electronic Commerce
INFS3608	Advanced Database Systems

and:

Satisfactory completion of at least another 12 units of credit courses in Information Systems with a minimum of 6 units of credit at level 3.

Satisfactory completion of all other requirements of the program.

Bachelor of Science (Business Information Technology)

The basis of accreditation is:

Satisfactory completion of the following core courses:

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks
INFS2609	Software Implementation
INFS2691	Industrial Training 1
INFS3605	Implementation Workshop
INFS3692	Industrial Training 2
INFS3606	Telecommunications for Electronic Commerce
INFS3608	Advanced Database Systems
INFS4693	Industrial Training 3

and:

Satisfactory completion of at least another 12 units of credit in level 3 or 4 courses in Information Systems.

Satisfactory completion of at least another 42 units of credit of INFS courses with a minimum of 6 units of credit at Honours level.

Satisfactory completion of all other requirements of the program.

Conditions of accreditation

Each course is accredited as a whole course and the accreditation may not be extended to students who are granted advanced standing, credit(s) or exemption(s) by the institution. A course undertaken by a student granted advanced standing, credit(s) or exemption(s) will only be regarded as the accredited course where, in the opinion of the Society, credit(s) or exemption(s) are given for equivalent subjects (particularly in terms of Information Technology content) taken at an equivalent educational level and at an institution of equivalent academic standing.

Australian Human Resource Institute (AHRI)

The following HR qualifications offered by the Faculty of Commerce and Economics have been accredited the National Accreditation Committee (NAC) of the Australian Human Resources Institute.

Bachelor of Commerce major Human Resource Management
 Bachelor of Economics major Human Resource Management
 Bachelor of Arts major Human Resource Management
 Bachelor of Social Science major Human Resource Management
 Combined Bachelor of Arts/Bachelor of Commerce major Human Resource Management
 Master of Commerce with specialisation in Human Resource Management

Accreditation is granted for a period of three years from December 2004 to December 2007. For more information, please refer to the website: www.amsrs.com.au

The Australian Institute of Banking and Finance (AIBF)

The educational requirements for Associateship will be satisfied on completion of a University degree program specialising in Banking and Finance which includes a management, a marketing and four banking and finance courses.

The educational requirements for Senior Associateship will be satisfied on completion of a University degree program specialising in Banking and Finance which includes a management, a marketing and four banking and finance courses and employment in the Australia/New Zealand banking and finance industry for at least two years.

Graduates who have met the academic, but not the work experience, requirements for Senior Associate, qualify for Associate membership.

Students are advised to contact the AIBF for current requirements: www.aibf.com.au

Australian Market and Social Research Society (AMSRS)

Undergraduate marketing students at UNSW are able to obtain the Certificate of Market Research if they have successfully completed a number of approved courses. The Certificate of the AMSRS is widely recognised by government and industry as a measure of competence in market research.

To qualify for the Certificate, undergraduate students must complete and pass the following courses:

MARK1012	Marketing Fundamentals
MARK2051	Consumer Behaviour
MARK2052	Marketing Research
MARK2054	Market Analysis

Students who have successfully completed the required courses at UNSW must complete the application form which is available from the School of Marketing Office or contact The Australian Market and Social Research Society (AMSRS), telephone (02) 9566 3102, fax (02) 9571 5944, website www.amsrs.com.au. Further information is also available from the Professional Associations section in the Marketing Careers website: www.marketing.unsw.edu.au

Australian Securities and Investment Commission (ASIC)

The Bachelor of Commerce (Finance) from the School of Banking and Finance at UNSW provides PS146 Tier qualifications in the following areas:

Financial Planning
 Securities
 Managed Investments
 Superannuation
 General Insurance
 Life Insurance
 Generic Knowledge Skills

FINS1612 Capital Markets & Institutions, FINS2624 Portfolio Management, FINS2643 Wealth Management, FINS3637 Wealth Management Advice, ECON3114 Superannuation & Retirement Benefits.

Australian Securities and Investment Commission details are available at www.asic.gov.au/etraining/etrain.nsf

Chartered Secretaries Australia (CSA)

CSA is the professional association for 10,000 company secretaries and corporate managers in Australia. It also operates as the Australian Division of the International Institute of Chartered Secretaries and Administrators to which most CSA members also belong.

CSA accredits courses which, if completed, count towards the academic requirements of both professional associations. During their undergraduate studies, students are encouraged to become CSA Student Members.

For details of accredited courses and student membership, please contact Dr John Nelson, National Education Manager, CSA, 70 Castlereagh Street, Sydney, telephone (02) 9223 5744, email info@CSAust.com, website www.csaust.com.au

CPA Australia

CPA Australia has accepted UNSW as an approved tertiary institution for the purpose of its membership qualifications.

Associate membership of CPA Australia requires an accredited undergraduate degree with a major in accounting and in the case of UNSW, the completion of the courses listed below.

If you are unable to fit these courses in as part of your degree requirements, you may have to enrol in additional classes as non-award.

ACCT2522	Management Accounting: Process Improvement and Innovation
ACCT2542	Corporate Financial Reporting and Analysis
ACCT3563	Issues in Financial Reporting and Analysis
or	
ACCT3573	Issues in Financial Reporting and Analysis (Honours)
ACCT3583	Stakeholder Value Management
or	
ACCT3593	Stakeholder Value Management (Honours)
ACCT3708	Auditing and Assurance Services*
or	
ACCT3718	Auditing and Assurance Services (Honours)*
FINS1613	Business Finance

INFS1602	Computer Information Systems
LEGT1711	Legal Environment of Commerce
LEGT2721	Business Transactions
LEGT2741	Business Entities
LEGT2751	Business Taxation*

*It is no longer mandatory to include ACCT3708 (or ACCT3718) and LEGT2751 but it is desirable to do so.

Students seeking professional recognition are advised to confirm membership requirements with CPA Australia. Please refer to their website at: www.cpaaustralia.com.au

The Institute of Actuaries of Australia

The UNSW actuarial program is fully accredited by the Institute of Actuaries of Australia and recognised for exemptions by the Institute of Actuaries (London) for the Core Technical subjects. The following courses at UNSW correspond to the Part I and Part II subjects of the IAA professional examinations:

UNSW Course	Professional Subject
ACTL2002 or MATH2801 & MATH2831 or MATH2901 & MATH2931	CT3
ACTL2001	CT1
ACTL2003	CT4 and CT6
ACTL3001	CT4
ACTL3002	CT5
ACTL3003	CT6
ECON1101 & ECON2102 or ECON1102 & ECON2101	CT7
ACCT2542 & FINS1613	CT2
ACTL3004	CT8

Students wishing to apply for exemption from the Part I professional examinations must achieve above average performance in the relevant courses.

It is recommended that students who intend to complete all of the Part I professional actuarial subjects enrol in MATH1151 Mathematics for Actuarial Studies and Finance 1A and MATH1251 Mathematics for Actuarial Studies and Finance 1B in Year 1.

ECON1101 Microeconomics 1 and ECON2102 Macroeconomics 2 may satisfy exemption requirements for Subject 107.

For students completing a combined BSc BCom, MATH2801 Theory of Statistics and MATH2831 Linear Models may also satisfy exemption requirements for Subject 101.

Qualification as an Associate of the Institute of Actuaries of Australia (AIAA) is attained on completion of the courses in Parts I and II. Qualification as a Fellow of the Institute of Actuaries of Australia (FIAA) requires the completion of subjects in Parts I, II and III of the professional actuarial examinations.

The syllabus of the Part I courses is covered in the undergraduate Bachelor of Commerce program as listed above.

A **sample program**, including options designed to cover all of the professional Part I Courses of the Institute of Actuaries of Australia, is as follows:

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A
ECON1101	Microeconomics 1
MATH1151	Mathematics for Actuarial Studies & Finance 1A
Option*	

*This option should normally be a course towards the co-major or minor or a computing course.

Session Two

ACCT1511	Accounting and Financial Management 1B
ECON1102	Macroeconomics 1
MATH1251	Mathematics for Actuarial Studies & Finance 1B
ACTL1001	Actuarial Studies and Commerce

Year 2

Session One

ACTL2001	Financial Mathematics
ACTL2002	Probability and Statistics for Actuaries

ECON2101	Microeconomics 2
Option	

Session Two

ACTL2003	Stochastic Models for Actuarial Applications
FINS1613	Business Finance
ACCT2542	Corporate Financial Reporting and Analysis
Option	

Year 3

Session One

ACTL3001	Actuarial Statistics
ACTL3002	Life Insurance and Superannuation Models
Option	
Option	

Session Two

ACTL3003	Insurance Risk Models
ACTL3004	Financial Economics for Insurance and Superannuation
Option	
Option	

Part II of the professional examinations is studied after graduating or in an Honours year and consists of the Institute Actuarial Control Cycle subjects. No exemptions are available from the Part III examinations. Two subjects are completed by distance education through the Institute of Actuaries of Australia, usually on a part-time basis after completing the Part I and Part II subjects. Part III consists of four half-year subjects completed by distance education through the Institute of Actuaries of Australia usually on a part time basis after completing the Part I and II subjects. Two of these subjects (Module 1: Investments, and Module 4: Commercial Actuarial Practice) are compulsory. In Modules 2 and 3 students select subjects in one specialty area of practice: Life Insurance; General Insurance; Superannuation & Planned Savings; and Investment Management & Finance.

The Faculty of Actuaries and the Institute of Actuaries in the UK offer exemptions from the equivalent subjects in their syllabus if students have obtained exemption through the Institute of Actuaries of Australia. This covers only Part I subjects. However, Fellows of the Institute of Actuaries of Australia can obtain Fellowship of the Institute of Actuaries (London) if they wish to practice in the UK or Europe.

Students who have completed an actuarial studies major and obtained exemptions from the Part I subjects of the Institute of Actuaries of Australia can apply for waivers of some of the examinations of the Society of Actuaries (North America). Fellows of the Institute of Actuaries of Australia can apply for admission as an Associate of the Society of Actuaries if they wish to practise in North America.

Fellowship of the Institute of Actuaries of Australia (FIAA) is recognised by local actuarial societies in Hong Kong, Singapore, Malaysia, New Zealand and Japan. The actuarial societies in Hong Kong, Singapore and Malaysia do not conduct their own examinations.

For more information, please go to Institute's website at www.actuaries.asn.au

The Institute of Chartered Accountants in Australia (ICAA)

Graduates who have completed an accredited undergraduate degree with a major in accounting are eligible under the Institute's admission requirements to enter the 'CA Program' leading to membership, provided they have in the case of UNSW included in their program the following courses. If you are unable to fit these courses in as part of your degree requirements, you may have to enrol in additional classes as non-award.

ACCT2522	Management Accounting: Process Improvement and Innovation
ACCT2542	Corporate Financial Reporting and Analysis
ACCT3563	Issues in Financial Reporting and Analysis
or	
ACCT3573	Issues in Financial Reporting and Analysis (Honours)
ACCT3583	Stakeholder Value Management
or	
ACCT3593	Stakeholder Value Management (Honours)
ACCT3708	Auditing and Assurance Services
or	
ACCT3718	Auditing and Assurance Services (Honours)
FINS1613	Business Finance
LEGT1711	Legal Environment of Commerce

LEGT2721	Business Transactions
LEGT2741	Business Entities
LEGT2751	Business Taxation

It is no longer mandatory to include INFS1602 but it is desirable to do so.

Students undertaking the combined Bachelor of Commerce Bachelor of Laws programs should substitute the following seven courses for the last four courses listed above.

LAWS1071	Contracts 1
LAWS1072	Contracts 2
LAWS4010	Business Associations 1
LAWS1092	Business Associations 2
LAWS2051	Elements of Income Tax Law
LAWS2052	Advanced Revenue Law

Students are also advised to contact the Institute in writing for current requirements: www.icaa.org.au

The Securities Institute of Australia

The Securities Institute of Australia grants exemptions from certain courses leading to associate membership of the Institute to graduates who have completed finance courses offered in the BCom or BEc degree programs.

Applications for registration, exemption or admission should be made direct to the Institute: www.securities.edu.au

Program Rules and Information

3502 Bachelor of Commerce

BCom

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Commerce program allows students to develop an understanding of institutional structures and processes supporting global commerce and disciplinary skills and perspectives relevant to commerce. Students will also develop professional competences and ethical perspectives relevant to practice in global contexts.

Program Objectives and Learning Outcomes

The objectives of the Bachelor of Commerce (BCom) are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Program Structure

The program normally consists of 144 units of credit to be completed over a period of three academic years or six 14-week sessions, with the exception of programs with an Industrial Training component which consist of 192 units of credit over four academic years or eight 14-week sessions.

Except in exceptional circumstances, a student must enrol in a minimum of 6 units per session and will not be permitted to enrol in more than 24 units per session.

There are 36 units of common Level 1 core courses as follows:

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)

Note: Students in Actuarial Studies programs substitute approved Mathematics courses for professional recognition for ECON1202 and ECON1203.

General Education Requirements

Students in this program must complete 12 units of credit in General Education courses or their equivalent (unless otherwise entitled to exemption). For further information, please refer to the General Education section in this Handbook.

Please note that students enrolled in programs within the Faculty of Commerce and Economics cannot take General Education courses offered by the Faculty of Commerce and Economics.

Honours

Upon completion of first or second years of a full-time program or the corresponding stages of a part-time program, a candidate may make a written application to the Head of School concerned for permission to enrol for an Honours degree. When such permission is granted but a candidate's later performance is unsatisfactory, permission to continue as an Honours student may be withdrawn and the student may proceed to an appropriate Pass degree.

A person who has graduated with a Pass degree of Bachelor of Commerce can not be admitted to candidature for the Honours degree of Bachelor of Commerce, except with special permission on the recommendation of the Head of the School.

Academic Rules

Rule 1 - Pass and Honours Degrees

The degree of Bachelor of Commerce may be conferred as a Pass degree or as an Honours degree. There shall be three classes of Honours, namely Class 1, Class 2 in two Divisions and Class 3. In cases of superior academic performance throughout the program, the Pass degree will be conferred with Distinction.

Rule 2 - Disciplinary Minors

Students not completing the requirements of two majors in the Bachelor of Commerce degree must complete a 'disciplinary minor' in a discipline other than their major. A 'disciplinary minor' is defined as four approved session courses, or equivalent value for courses taught outside the Faculty, of which no more than 12 units of credit may be first year courses.

Rule 3 - Transfer Between Degrees

Candidates are admitted to the Bachelor of Commerce, the Bachelor of Commerce in Marketing, Tourism and Hospitality Management, the Bachelor of Commerce/Bachelor of Science or the Bachelor of Economics program. There is no automatic transfer between these programs. Candidates who wish to transfer between these programs must reapply through UAC if they are a local student or the UNSW Admissions Office if they are International students.

Rule 4 - Assessable Hours

Normal workload expectations for each degree are a minimum of 25 hours per session per unit of credit, including class contact hours, preparation and time spent on all assessable work.

Rule 5 - Passing in a Course

Where, in the following rules, reference is made to the requirement that a candidate shall pass a course, the requirement shall be construed as meaning that the candidate shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of the School concerned.

Rule 6 - Normal Program

The program leading to the award of the degree of Bachelor of Commerce normally consists of 144 units of credit to be completed over a period of three academic years or six 14-week sessions, with the exception of programs with an Industrial Training component which consist of 192 units of credit over four academic years or eight 14-week sessions. Except in exceptional circumstances, a student must enrol in a minimum of 6 units per session and will not be permitted to enrol in more than 24 units.

Rule 7 - Minimum Time for Completion

(a) The minimum time for completing the requirements for the degree of Bachelor of Commerce at Pass level is normally six sessions full-time or 12 sessions part-time, unless the student is enrolled in a Co-op program in which case the minimum time for completion is eight sessions full-time.

(b) For the Bachelor of Commerce in Marketing, Tourism and Hospitality Management program at Pass level, the minimum time for completion is eight sessions full-time.

Rule 8 - Nomination of Plan

A student must nominate on the enrolment form the specialisation intended when enrolling for the first year. A candidate may change from one plan to another but not more than once per year. The change requires the approval of the program authority and unless it is a transfer between a Pass and an Honours program, the change must be completed before enrolment is finalised for the particular year.

Rule 9 - Academic Program Requirements: BCom 3502

To complete the requirements for the award of the degree of Bachelor of Commerce:

1. For the Pass degree, a student must complete and pass 144 units of credit, which shall include:

1.1 36 units of common Level 1 core courses as follows:

ACCT1501	Accounting & Financial Management 1A
ACCT1511	Accounting & Financial Management 1B
ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON1202	Quantitative Methods A*
ECON1203	Quantitative Methods B*

*Students in Actuarial Studies programs substitute approved Mathematics courses for professional recognition for ECON1202 and ECON1203.

1.2 (a) satisfactory completion of a minimum of 12 units of credit in General Education courses or their equivalent (unless otherwise entitled to exemption). Combined undergraduate degrees offered with another faculty and leading to the award of two degrees satisfy this requirement (12 units of credit in General Education) within the program.

(b) undertake an additional 56 hours of study which examines the purposes and consequences of their university education and which fosters socially, ethically and professionally responsible behaviour. The Bachelor of Commerce fulfills this requirement as part of the normal program curriculum.

1.3 either a major of at least 48 units in an approved disciplinary stream and a minor of 24 units of approved session courses of which no more than 12 units may be Level 1 courses (excluding Industrial Training components when included in program requirements); or

1.4 a double major of 84 units, consisting of 42 units from each of two approved disciplinary streams (excluding Industrial Training components when included in program requirements)

2. A student cannot:

2.1 count more than 60 units of Level 1 core and electives courses towards their degree unless in exceptional circumstances:

2.2 substitute more than 6 units of mainstream courses offered by other faculties towards General Education requirements.

2.3 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

3. A student enrolled in a Co-op program must satisfactorily complete the industrial training components specified in the program requirements,

4. For the Honours degree, a student must complete a further 48 units in an approved disciplinary stream.

4.1 Honours may be taken in one disciplinary stream only

4.2 The additional units, comprising specified courses from the relevant disciplinary stream and a thesis, must be completed in two sessions following the completion of the Pass degree component.

4.3 Honours degree will not be awarded if academic performance is below the prescribed level.

4.4 Except when recommended to the contrary by the relevant Head of School, a student intending to enter the Honours year must:

4.4.1 satisfy the Pass degree requirements and obtain a minimum average of 70% in Level 2 and Level 3 courses of the relevant disciplinary stream in the Pass degree component,

4.4.2 pass all courses in the Pass degree component at first attempt.

4.5 Except with the special permission of the program authority on the recommendation of the relevant Heads of School, a person on whom the Pass degree of Bachelor of Commerce or equivalent has been conferred shall not be admitted to candidature for the Honours degree of Bachelor of Commerce.

5. Approved disciplinary streams are listed hereafter:

Approved Disciplinary Streams (Pass)

Accounting
Accounting Co-op Program

Actuarial Studies
Actuarial Studies Co-op Program
Business Economics
Business Strategy and Economics Management
Business Statistics
Business Law
Economic History
Finance
Finance Co-op Program
Financial Economics
Human Resource Management
Industrial Relations
Information Systems
Information Systems and Management Co-op Program
International Business
Management
Marketing
Marketing Co-op Program
Modern Languages*
Taxation
Tourism and Hospitality Management#

* Not available as a single major, but as a co-major only

Available only as a co-major integrated program with Marketing (program code 3571)

Approved Disciplinary Streams (Honours)

To the end of fourth year:

Accounting
Actuarial Studies
Business Economics
Business Strategy and Economics Management
Finance
Financial Economics
Human Resource Management
Industrial Relations
Information Systems
International Business
Marketing
Taxation

Rule 10 - Honours Degree

Upon completion of first or second years of a full-time program or the corresponding stages of a part-time program, a candidate may make a written application to the Head of School concerned for permission to enrol for an Honours degree. When such permission is granted but a candidate's later performance is unsatisfactory, permission to continue as an Honours student may be withdrawn and the student may proceed to an appropriate Pass degree.

A person on whom the Pass degree of Bachelor of Commerce has been conferred shall not be admitted to candidature for the Honours degree of Bachelor of Commerce, except with special permission on the recommendation of the Head of the School.

Rule 11 - Credit for Courses Passed at Another University

Subject to the University rules governing admission with advanced standing, courses passed at another university may be counted towards fulfilling the requirements of the degree but, in general, not more than four courses studied for a year or equivalent which are already counted for another degree may be counted towards the requirements for the Bachelor of Commerce. Advanced standing will not normally be granted for courses completed more than 7 years before the date of admission of the applicant, except with the approval of the Head of the School.

Rule 12 - Options

Subject to the requirements of the individual programs, students may choose a maximum of 2 options from any approved course taught by any other UNSW faculties. Approval must be sought from the program authority to count courses as options. Apart from service courses for other faculties, all courses taught by the Faculty of Commerce and Economics will be automatically approved as options, but no course can be counted both as an option and as a prescribed course. Heads of the Schools may, in exceptional circumstances, vary courses in prescribed programs.

Rule 13 - Order of Progression of Courses

It is expected students shall undertake core courses in the equivalent of their first year. It is expected failed courses will be repeated in the first session in which they are next offered.

Rule 14 - Prerequisite and Corequisite Requirements

Except in exceptional circumstances, a candidate shall not enrol in any course without having satisfied the prescribed prerequisite or corequisite requirements.

Professional Recognition**Australian Computer Society (ACS)**

Programs accredited to the level of Professional by the Australian Computer Society include:

- Bachelor of Commerce (Information Systems) including Honours and double degrees
- Bachelor of Commerce (Information Systems and Management) including Honours and double degrees

For more information, please refer to 'Professional Recognition of Programs' in the preceding section.

The Institute of Actuaries of Australia

The profession of Actuary is one of the oldest in the financial world. It is highly regarded and requires the completion of, or exemption from, professional examinations. Fellows of The Institute of Actuaries of Australia, the Institute of Actuaries or Faculty of Actuaries (UK), or the Society of Actuaries (North America) can practise as actuaries in Australia.

Students intending to enter the actuarial profession should normally have completed 4-unit mathematics or obtained a high mark in 3-unit mathematics and should be aiming to obtain an average of at least 70% mark in their University studies. Experience has shown that the higher your UAI or equivalent, the better your chances of success in meeting the standard for exemption from the professional actuarial examinations (95 and above is often recommended).

To obtain maximum professional actuarial course exemptions, ACTL2001, ACTL2002, ACTL2003, ACTL3001, ACTL3002, ACTL3003 and ACTL3004 should be completed as well as ACCT2542, ECON2101/ECON2102 and FINS1613.

CPA Australia

CPA Australia has accepted this University as an approved tertiary institution for the purpose of its membership qualifications. Associate membership of this association requires an accredited undergraduate degree with a major in accounting.

The Institute of Chartered Accountants in Australia

Graduates who have completed the Bachelor of Commerce degree program are eligible under the Institute's new admission requirements to enter the 'CA Program' leading to membership. The specific courses to be included have been reduced by the Institute to the following 6 core areas: Financial Accounting, Management Accounting, Finance, Auditing, Australian Commercial and Corporate Law, & Australian Taxation Law.

Chartered Secretaries Australia (CSA)

CSA is the professional association for 10,000 company secretaries and corporate managers in Australia. It also operates as the Australian Division of the International Institute of chartered Secretaries and Administrators to which most CSA members also belong.

CSA accredits courses which, if completed, count towards the academic requirements of both professional associations. During their undergraduate studies, students are encouraged to become CSA Student Members.

The Australian Institute of Banking and Finance (AIBF)

The educational requirements for Associateship will be satisfied on completion of a University degree program specialising in Banking and Finance which includes a management, a marketing and four banking and finance courses.

The educational requirements for Senior Associateship will be satisfied on completion of a University degree program specialising in Banking and Finance which includes a management, a marketing and four banking and finance courses and employment in the Australia/New Zealand banking and finance industry for at least two years.

Graduates who have met the academic, but not the work experience requirements for Senior Associate, qualify for Associate membership.

Students are advised to contact the AIBF for current requirements: www.aibf.com.au

The Securities Institute of Australia

The Securities Institute of Australia grants exemptions from certain courses leading to associate membership of the Institute to graduates who have completed finance courses offered in the BCom or BEc degree programs.

Applications for registration, exemption or admission should be made direct to the Institute: www.securities.edu.au

Australian Securities and Investment Commission (ASIC)

The Bachelor of Commerce (Finance) from the School of Banking and Finance at UNSW provides PS146 Tier qualifications in the following areas:

Financial Planning
Securities
Managed Investments
Superannuation
General Insurance
Life Insurance
Generic Knowledge Skills

providing the following courses are completed:

FINS1612 Capital Markets & Institutions, FINS2624 Portfolio Management, FINS2643 Wealth Management, FINS3637 Wealth Management Advice, ECON3114 Superannuation & Retirement Benefits.

Australian Securities and Investment Commission details are available at www.asic.gov.au/etraining/etrain.nsf

Australian Market and Social Research Society (AMSRS)

Undergraduate marketing students at UNSW are able to obtain the Certificate of Market Research if they have successfully completed a number of approved courses. The Certificate of the MRSA is widely recognised by government and industry as a measure of competence in market research.

To qualify for the Certificate, undergraduate students must complete and pass the following courses:

MARK1012	Marketing Fundamentals
MARK2051	Consumer Behaviour
MARK2052	Marketing Research
MARK2054	Market Analysis

For further information contact the School of Marketing or the Australian Market and Social Research Society (AMSRS). www.amsrs.com.au

Australian Human Resource Institute (AHRI)

The Australian Human Resources Institute (AHRI) is the national association representing human resource and people management professionals. AHRI leads the direction and fosters the growth of the HR profession through actively setting standards and building the capability of the profession.

Through its international affiliations and its close association with industry and academia, AHRI ensures that its members are given access to a soundly-based professional recognition framework. For more information, please refer to the website: www.ahri.com.au

Co-op Scholarships

The Co-op Program at UNSW provides outstanding scholars with the opportunity of combining the requirements of the Bachelor of Commerce degree with industrial training experience. Entry to this program is at first year only and through the selection procedures administered by the Co-op Program Office.

For further information, see: www.co-op.unsw.edu.au

3543 Bachelor of Economics**BEc****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Economics program allows students to develop an understanding of institutional structures and processes supporting global commerce and disciplinary skills and perspectives relevant to commerce. Students will also develop professional competences and ethical perspectives relevant to practice in global contexts.

Program Objectives and Learning Outcomes

The objectives of the Bachelor of Economics are:

- To develop understanding of institutional structures and processes supporting global commerce;

- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Program Structure

For the Bachelor of Economics Pass degree, a student must complete and pass 144 units of credit, which shall include:

36 units of common Level 1 core courses as follows:

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

Please note that students enrolled in programs within the Faculty of Commerce and Economics cannot take General Education courses offered by that Faculty.

Honours

Upon completion of third year of a full-time program or the corresponding stages of a part-time program, a candidate may make a written application to the Honours Coordinator concerned for permission to enrol for an Honours degree.

Honours information sessions are held by the School of Economics during Session Two. Please refer to school website for dates and location.

Academic Rules

Rule 1 - Pass and Honours Degrees

The degree of Bachelor of Economics may be conferred as a Pass degree or as an Honours degree. There shall be three classes of Honours, namely Class 1, Class 2 in two Divisions and Class 3. In cases of superior academic performance throughout the program, the Pass degree will be conferred with Distinction.

Rule 2 - Disciplinary Minors

All students satisfying the requirements of the Bachelor of Economics degree automatically satisfy 'disciplinary minor' requirements. A 'disciplinary minor' is defined as four approved session courses, or equivalent value for courses taught outside the Faculty, of which no more than 12 units of credit may be first year courses.

Rule 3 - Transfer Between Degrees

Candidates are admitted to the Bachelor of Commerce, the Bachelor of Commerce in Marketing, Tourism and Hospitality Management, the Bachelor of Commerce/Bachelor of Science or the Bachelor of Economics program. There is no automatic transfer between these programs. Candidates who wish to transfer between these programs must reapply through UAC if they are a local student or the UNSW Admissions Office if they are International students.

Rule 4 - Assessable Hours

Normal workload expectations for each degree are a minimum of 25 hours per session per unit of credit, including class contact hours, preparation and time spent on all assessable work.

Rule 5 - Passing in a Course

Where, in the following rules, reference is made to the requirement that a candidate shall pass a course, the requirement shall be construed as meaning that the candidate shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of the School concerned.

Rule 6 - Normal Program

The program leading to the award of the degree of Bachelor of Economics normally consists of 144 units of credit to be completed over a period of three academic years or six 14-week sessions. Except in exceptional circumstances, a student must enrol in a minimum of 12 units per session and will not be permitted to enrol in more than 24 units.

Rule 7 - Minimum Time for Completion

(a) The minimum time for completing the requirements for the degrees of Bachelor of Commerce or Bachelor of Economics at Pass level is normally six sessions full-time or 12 sessions part-time, unless the student is enrolled in a Co-op program in which case the minimum time for completion is eight sessions full-time.

(b) For the Bachelor of Commerce in Marketing, Tourism and Hospitality Management program at Pass level, the minimum time for completion is eight sessions full-time.

Rule 8 - Nomination of Plan

A student must nominate on the enrolment form the specialisation intended when enrolling for the first year. A candidate may change from one plan to another but not more than once per year. The change requires the approval of the program authority and unless it is a transfer between a Pass and an Honours program, the change must be completed before enrolment is finalised for the particular year.

Rule 9 - Academic Program Requirements: BEc 3543

To complete the requirements for the degree of Bachelor of Economics:

1. For the Pass degree, a student must complete and pass 144 units of credit, which shall include:

2. 36 units of common Level 1 core courses as follows:

ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)

3. (a) satisfactory completion of a minimum of 12 units of credit in General Education courses or their equivalent (unless otherwise entitled to exemption). Combined undergraduate degrees offered with another faculty and leading to the award of two degrees satisfy this requirement (12 units of credit in General Education) within the program.

(b) undertake an additional 56 hours of study which examines the purposes and consequences of their university education and which fosters socially, ethically and professionally responsible behaviour. The Bachelor of Economics fulfills this requirement as part of the normal program curriculum.

4. A student cannot count more than 60 units of Level 1 core and electives courses towards their degree unless in exceptional circumstances.

4.1 substitute more than 6 units of mainstream courses offered by other faculties towards General Education requirements.

4.2 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

5. Each student must include the following in their degree program:

5.1 either a major of at least 60 units in the Economics, Econometrics, Financial Economics or Economic History disciplinary streams (including units taken as core studies where applicable);

5.2 or a double major of 90 units, with at least 48 units in one of the Economics, Econometrics, Financial Economics or Economic History disciplinary streams, and at least 42 units in another approved disciplinary stream.

6. In addition to the Pass degree requirements the award of a degree with Honours requires:

6.1 the completion of at least 60 units (single major) or 48 units (double major) in the Economics, Econometrics, Financial Economics or Economic History disciplinary streams specified as necessary preparation for fourth year studies, and

6.2 the completion of four specified courses in fourth year and a thesis that is the equivalent of two courses. Honours studies may proceed in more than one disciplinary stream prior to fourth year. In the fourth year, Honours may be taken in the Economics, Econometrics or Economic History disciplinary streams only, or a combined Honours program in Economics and Econometrics may be taken.

7. Approved disciplinary streams are listed hereafter:

Approved Disciplinary Streams (Pass)

Accounting
Actuarial Studies
Asian Studies#
Business Law
Economics
Econometrics

Economics/Econometrics
 Economic History
 Finance
 Financial Economics
 Human Resource Management
 Industrial Relations
 Information Systems
 International Business
 Management
 Marketing
 Modern Languages*
 Taxation

#Available only as a co-major integrated program with Economics

*Not available as a single major, but as a co-major only

Approved Disciplinary Streams (Honours)

To the end of fourth year:

Economics
 Econometrics
 Economics/Econometrics
 Economic History

Rule 10 - Honours Degree

Upon completion of first or second years of a full-time program or the corresponding stages of a part-time program, a candidate may make a written application to the Head of School concerned for permission to enrol for an Honours degree. When such permission is granted but a candidate's later performance is unsatisfactory, permission to continue as an Honours student may be withdrawn and the student may proceed to an appropriate Pass degree.

A person on whom the Pass degree of Bachelor of Economics has been conferred shall not be admitted to candidature for the Honours degree of Bachelor of Economics, except with special permission on the recommendation of the Head of the School.

Rule 11 - Credit for Courses Passed at Another University

Subject to the University rules governing admission with advanced standing, courses passed at another university may be counted towards fulfilling the requirements of the degree but, in general, not more than four courses studied for a year or equivalent which are already counted for another degree may be counted towards the requirements for the Bachelor of Commerce or Bachelor of Economics. Advanced standing will not normally be granted for courses completed more than 7 years before the date of admission of the applicant, except with the approval of the Head of the School.

Rule 12 - Options

Subject to the requirements of the individual programs, students may choose a maximum of 2 options from any approved course taught by any other UNSW faculties. Approval must be sought from the program authority to count courses as options. Apart from service courses for other faculties, all courses taught by the Faculty of Commerce and Economics will be automatically approved as options, but no course can be counted both as an option and as a prescribed course. Heads of the Schools may, in exceptional circumstances, vary courses in prescribed programs.

Rule 13 - Order of Progression of Courses

It is expected students shall undertake core courses in the equivalent of their first year. It is expected failed courses will be repeated in the first session in which they are next offered.

Rule 14 - Prerequisite and Corequisite Requirements

Except in exceptional circumstances, a candidate shall not enrol in any course without having satisfied the prescribed prerequisite or corequisite requirements.

3571 Bachelor of Commerce in Services Marketing - Tourism & Hospitality

BCom

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Commerce in Services Marketing - Tourism and Hospitality is a four-year full-time degree that prepares graduates for management positions in a wide variety of careers in the rapidly growing service industry.

Its strengths are its rigorous grounding in services marketing, tourism and hospitality management, accounting and business statistics; its hands-on industry training and employment experience; and its development of students' leadership, management and communication skills. In addition, the degree includes a full major in marketing from one of Australia's leading university marketing programs. This opens up not only an important niche specialisation in tourism and hospitality, but a further range of employment options in the field of marketing in a wide range of service industries.

Entry is by academic achievement and a short interview. Successful applicants are typically in the top decile of their state high school grading. The interview explores applicants' leadership potential, communication skills and commitment to a career in the tourism industry, and may be conducted on campus or by video.

Program Objectives and Learning Outcomes

Students who have completed the program will have a rigorous grounding in tourism and hospitality management, accounting, economics and business statistics; hands-on industry training and employment experience; and have developed leadership, management and communication skills.

Program Structure

Year 1

Session One

ECON1101	Microeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
SERV1100	Tourism and Hospitality Operational Studies	(6 UOC)

Session Two

SERV1001	Foundamentals of Tourism	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)

Year 2

Session One

SERV2001	Destination Marketing	(6UOC)
ACCT1511	Accounting & Financial Management 1B	(6UOC)
MARK2051	Consumer Behaviour	(6UOC)
MARK2055	Services Marketing and Management	(6UOC)

Session Two

SERV2002	Services Operations Management	(6 UOC)
MARK2053	Marketing, Communications, & Promotions Management	(6 UOC)
SERV2003	Service Industry Project	(6 UOC)
Option		(6 UOC)

Year 3

Session One

MARK2052	Marketing Research	(6 UOC)
LEGT3001	Legal Aspects of Tourism	(6 UOC)
or		
ECON2117	Economics of Tourism	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Session Two

MARK2054	Market Analysis	(6 UOC)
SERV3001	Managing People for Service Advantages	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Year 4

Session One

SERV4001	Strategic Management in Tourism and Hospitality	(6 UOC)
SERV4002	Entrepreneurship in Services	(6 UOC)

Options	(6 UOC)
Options	(6 UOC)
Session Two	
SERV4003	Tourism Policy and Planning (6 UOC)
MARK3082	Strategic Marketing Management (6 UOC)
Option	(6 UOC)
Option	(6 UOC)

Electives

SERV2004	Event Management (6 UOC)*
SERV2005	Managing Customer Service Experience (6 UOC)*

*May not be offered in 2006. Please check school timetable.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

Please note that students enrolled in programs within the Faculty of Commerce and Economics cannot take General Education courses offered by that Faculty.

Honours

For the Honours degree, a student must complete a further 48 units in a disciplinary stream that the student has chosen as a co-major in the Pass degree component.

For additional details, please refer to the Academic Rules section below.

Academic Rules

To complete the requirements for the award of the degree of Bachelor of Commerce in Services Marketing - Tourism and Hospitality:

Rule 1

1. For the Pass degree, a student must complete and pass 192 units of credit, which shall include:

1.1 36 units of common Level 1 core courses as follows:

ACCT1501	Accounting and Financial Management 1A
ACCT1511	Accounting and Financial Management 1B
ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B

1.2 12 units of General Education courses in accordance with University rules and Faculty of Commerce and Economics policy.

1.3 a double major of 96 units, consisting of 42 units from the Marketing disciplinary stream and 54 units from the Tourism and Hospitality Management disciplinary stream;

1.3.1 6 units of approved industry training course, based on minimum of 250 hours of employment (SERV2003);

1.3.2 6 units of ECON2117 Economics and Tourism or LEGT3001 Legal Aspects of Tourism;

1.4 Either

a. A third major of 42 units in an approved major offered in the Bachelor of Commerce program

or

b. 42 units of approved electives including a minimum of 24 units of Commerce and Economics, subject to Rule 2.1

Rule 2

2. A student cannot:

2.1 count more than 48 units of Level 1 core and electives courses towards their degree except in exceptional circumstances;

2.2 attempt General Education courses until 42 units of mainstream courses have been attempted;

2.3 count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of General Education requirements;

2.4 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

Rule 3

3. For the Honours degree, a student must complete a further 48 units in a disciplinary stream that the student has chosen as a co-major in the Pass degree component.

3.1 Honours may be taken in one disciplinary stream only.

3.2 The additional units, comprising specified courses from the relevant disciplinary stream and a thesis, must be completed in two sessions following the completion of the Pass degree component.

3.3 The Honours degree will not be awarded if academic performance is below the prescribed level.

3.4 Except when recommended to the contrary by the relevant Head of School, a student intending to enter the Honours year must;

3.4.1 satisfy the Pass degree requirements and obtain a minimum average of 70% in Level 2 and Level 3 courses of the relevant disciplinary stream in the Pass degree component and

3.4.2 pass all courses in the Pass degree component at first attempt.

3.5 Except with the special permission of the course authority on the recommendation of the relevant Heads of School, a person on whom the Pass degree of Bachelor of Commerce or equivalent has been conferred shall not be admitted to candidature for the Honours degree of Bachelor of Commerce.

Rule 4

4. Approved disciplinary streams are listed below:

Approved Disciplinary Streams (Pass)

- Services, Tourism and Hospitality
- Marketing
- Offered in the BCom program

Approved Disciplinary Streams (Honours)

- Disciplinary Honours offered in the Bachelor of Commerce, after completion of the requirements of the Pass degree co-major.

3979 Bachelor of Science in Information Systems**BSc****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Science in Information Systems degree is a highly prized qualification which provides business skills along with a specialisation in information systems and technology. The program is intended to develop conceptual and practical skills. After an introductory first stage, students will learn about systems design, databases, communications and commercial programming in parallel with computer science, mathematics and management accounting courses.

Program Objectives and Learning Outcomes

The program is intended to develop conceptual and practical skills. After an introductory first stage, students study systems design, database, communications and commercial programming in parallel with Computer Science, Mathematics and Management Accounting courses. In the Honours stage, well-qualified students may specialise in Advanced Information Systems and Data Management topics.

Program Structure**Year 1**

INFS1602	Computer Information Systems	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
COMP1011	Computing 1A	(6 UOC)
INFS1603	Business Data Management	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
COMP1021	Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6UOC)
MATH1241	Higher Mathematics 1B	(6UOC)

Year 2

INFS2609	Software Implementation	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)

And ONE of the following courses:

MATH2841	Statistics SS	(6 UOC)
MATH2801	Theory of Statistics	(6 UOC)
Elective courses totalling 12 units of credit		(12 UOC)
General Education course(s) totalling 6 units of credit		(6 UOC)

1 Commerce Elective course totalling 6 units of credit from one of the following:

ECON1101	Microeconomics 1	(6 UOC)
MGMT2721	Managing People	(6 UOC)
LEGT2771	Information Technology Law	(6 UOC)
ACTL1001	Actuarial Studies and Commerce	(6 UOC)

Year 3

INFS3608	Advanced Database Systems	(6 UOC)
INFS3605	Implementation Workshop	(6 UOC)
Elective level 2/3 INFS course totalling 6 units of credit from Table 1 or 2		(6 UOC)
Elective level 3 INFS course totalling 6 units of credit from Table 2		(6 UOC)
Elective courses		(12 UOC)
General Education course(s) totalling 6 units of credit		(6 UOC)

Year 4 Honours (optional)

INFS4795	Thesis Part A	(6 UOC)
INFS4796	Thesis Part B	(18 UOC)
INFS4886	Research Topics in Information Systems 1	(6 UOC)
INFS4887	Research Topics in Information Systems 2	(6 UOC)
2 level 4 INFS options from Table 3 totalling 12 units of credit		

Table 1 Level 2 Electives:

INFS2611	Requirements Elicitation	(3 UOC)

Table 2 Level 3 Electives:

INFS3611	Design Workshop	(6 UOC)
INFS3603	Business Intelligence Systems	(6 UOC)
INFS3604	Information Technology Management	(6 UOC)
INFS3685	Electronic Commerce Management	(6 UOC)

Table 3 Honours Options:

INFS4805	Information Systems Auditing	(6 UOC)
INFS4853	Information Systems Management	(6 UOC)
INFS4774	Information Systems Security	(6 UOC)
INFS4891	Decision Support Systems	(6 UOC)
INFS4893	Special Topic in Information Systems	(6 UOC)
INFS4848	Information Systems Project Management	(6 UOC)
INFS4810	Advanced Data Management	(6 UOC)
INFS4811	Knowledge Management Systems and Technology	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

Please note that students enrolled in programs within the Faculty of Commerce and Economics cannot take General Education courses offered by that Faculty.

Academic Rules**Pass degree requirements**

Conditions for the Award of the Degree:

1. A student must complete 144 units of credit including 12 units of General Education.
2. The degree must contain a major sequence of study as set out in the program below.
3. A student must complete no more than 60 units in Level I courses from at least three schools.
4. No student may commence Level II courses until 24 Level I units have been successfully completed.
5. A student must complete a minimum of 84 units of credit from Science schools.*
6. For entry to Honours, a student must complete at least 24 units at Level III in the relevant Major sequence and have the permission of the Head of School.

**Defined as Schools in the Faculty of Science plus those in other faculties that currently provide programs under the authority of the Faculty of Science.*

Professional Recognition**Australian Computer Society (ACS)**

The Bachelor of Science in Information Systems is accredited to the level of Professional by the Australian Computer Society:

For more information, please refer to 'Professional Recognition of Programs' in the preceding section.

3971 Bachelor of Science in Business Information Technology**BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program is available only to students admitted through the scholarship selection procedures administered by the UNSW Co-op Program office. The BSc (BIT) is a four-year degree program for which Honours may be awarded. It is an industry linked education program leading to the award of the qualification Bachelor of Science in Business Information Technology. The program draws on three core disciplinary areas: Information Systems, Accounting and Computer Science.

The BIT program has been designed in conjunction with Information Systems and Information Technology industry professionals to provide for the needs of Australian businesses. The program combines the requirements for the award of the degree with 18 months of coordinated industrial experience at three different sponsoring organisations (24 weeks at each). Industrial Training extends outside university sessions. A scholarship is payable from funds donated by the sponsoring organisations. Entry to the program is limited to students awarded a scholarship through the BIT selection procedures.

Consideration for entry to the course may proceed only on the basis of an application directly to Co-Op program Office at the University of New South Wales and application through UAC.

Students who are academically acceptable for the BIT Degree Program, but who are not offered a scholarship position, should consider registering for first stage entry into the BSc (IS) 3979 program. If BIT Scholarships become available at the end of Stage 1, students undertaking the BSc (IS) 3979 program may be offered an interview and a transfer into the BSc (BIT) 3971 co-operative Scholarship Degree Program.

Program Objectives and Learning Outcomes

This four stage course teaches Information Systems Theory and Practice and provides industrial training linked to that teaching. The three industrial training periods in the course are each of approximately six months duration, running from January of Stages 2 and 4, and July of Stage 3 of the program.

Program Structure**Year 1**

INFS1602	Computer Information Systems	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
COMP1011	Computing 1A	(6 UOC)
INFS1603	Business Data Management	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
COMP1021	Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

MATH2841	Statistics SS	(6 UOC)
INFS2609	Software Implementation	(6 UOC)
INFS2691	Industrial Training 1	(6 UOC)

INFS2603	Systems Analysis and Design	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
General Education elective totalling 6 units of credit		(6 UOC)
Elective course		(6 UOC)

Commerce elective course totalling 6 units of credit from one of the following:

ECON1101	Microeconomics 1	(6 UOC)
MGMT2721	Managing People	(6 UOC)
LEGT2771	Information Technology Law	(6 UOC)
ACTL1001	Actuarial Studies and Commerce	(6 UOC)

Year 3

INFS3608	Advanced Database Systems	(6 UOC)
INFS4886	Research Topics in Information Systems 1	(6 UOC)
INFS3692	Industrial Training 2	(12 UOC)
INFS3605	Implementation Workshop	(6 UOC)
INFS3606	Telecommunications for Electronics. Commerce	(6 UOC)

1 Elective from Table 2* (6 UOC)
General Education elective totalling 6 units of credit (6 UOC)

Year 4

INFS4795	Thesis Part A	(6 UOC)
INFS4796	Thesis Part B	(18 UOC)
INFS4887	Research Topics in Information Systems 2	(6 UOC)
INFS4693	Industrial Training 3	(12 UOC)

Honours Options totalling 12 units of credit from Table 3*

* See program entry for 3979 Bachelor of Science in Information Systems

Table 1 INFS Electives:

INFS2611	Requirements Elicitation	(3 UOC)
INFS3611	Design Workshop	(6 UOC)
INFS3603	Business Intelligence Systems	(6 UOC)
INFS3604	Information Technology Management	(6 UOC)
INFS3685	Electronic Commerce Management	(6 UOC)

Table 2 Level 4 Options:

INFS4805	Information Systems Auditing	(6 UOC)
INFS4853	Information Systems Management	(6 UOC)
INFS4891	Decision Support Systems	(6 UOC)
INFS4774	Information Systems Security	(6 UOC)
INFS4893	Special Topic in Information Systems	(6 UOC)
INFS4848	Information Systems Project Management	(6 UOC)
INFS4810	Advanced Data Management	(6 UOC)
INFS4811	Knowledge Management Systems and Technology	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies. For further information, please refer to the General Education section in this Handbook.

Please note that students enrolled in programs within the Faculty of Commerce and Economics cannot take General Education courses offered by that Faculty.

Academic Rules

Please refer to Program Structure for the Academic Requirements relating to this program.

Professional Recognition

Australian Computer Society (ACS)

The Bachelor of Science in Information Systems is accredited to the level of Professional by the Australian Computer Society:

For more information, please refer to 'Professional Recognition of Programs' in the preceding section.

3525 Bachelor of Commerce Bachelor of Arts

BCom BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Faculty of Commerce and Economics in conjunction with the Faculty of Arts and Social Sciences offers the combined Bachelor of Commerce Bachelor of Arts.

This is a five-year program combining the strengths and flexibility of each single degree program. It is expected that the combined degree program will appeal to students wanting, in particular, a strong, focused and highly regarded business program that is complemented by a humanities discipline - chosen out of personal interest or with a particular career objective in mind.

With approval, students with an excellent academic record may also enrol in an additional Honours year in the Bachelor of Commerce.

The combined Bachelor of Commerce Bachelor of Arts is a five-year (240 units of credit) degree program. The Bachelor of Commerce Bachelor of Arts program consists of 22 Commerce and Economics courses (132 units of credit) and 18 Arts and Social Science courses (108 units of credit). Students will typically enrol in 48 units of credit per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Program Objectives and Learning Outcomes

Bachelor of Commerce

The objectives of the Bachelor of Commerce are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Bachelor of Arts

An Arts degree is a pathway through a wealth of knowledge in the humanities and social sciences. Its objective is to stimulate students intellectually; to immerse them in worlds of learning; and to graduate them as citizens with strong written and oral communications skills, the capacity to research, criticise and reflect, and the ability to work independently and collaboratively.

Program Structure

Year 1 (48 units of credit)

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
Level 1 Arts and Social Science courses		(12 UOC)

Years 2-5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 UOC), 4 Arts and Social Sciences courses (24 UOC) each year.

Academic Rules

Rules relating to the award of the degree of Bachelor of Commerce shall apply wherever relevant to students enrolled in the combined Bachelor of Commerce Bachelor of Arts.

This is a five-year (240 units of credit) degree program. The Bachelor of Commerce Bachelor of Arts program consists of 22 Commerce and Economics courses (132 units of credit) and 18 Arts and Social Sciences courses (108 units of credit). Students will typically enrol in 48 units of credit per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Rules Relating to the Bachelor of Commerce Component

1. Each student must include the following in their degree program:

1.1 either a major of at least 48 units of credit in an approved disciplinary stream (see below) and a minor of at least 24 units of credit from a different discipline; or

1.2 a double major of 84 units of credit consisting of 42 units of credit from two approved disciplinary streams.

The remaining Commerce and Economics course or credit requirements not required for a major sequence and not Year 1 core courses, as prescribed, if any, may be chosen from any other courses offered by the Faculty of Commerce and Economics.

2. Approved Disciplinary Streams (Pass):

Accounting
Actuarial Studies
Business Economics
Business Statistics
Business Strategy & Economic Management
Business Law
Economic History
Financial Economics
Finance
Human Resource Management
Industrial Relations
Information Systems
International Business
Management
Marketing
Taxation

3. Candidates for Honours must complete one year of study additional to the minimum of five years required for the BCom BA at Pass level. Students wishing to take the Bachelor of Commerce at Honours level must consult the Head of School in which they wish to study for Honours. In addition to the Pass degree requirements the award with a degree of Honours requires:

3.1 the completion of at least 48 units of credit (single major) or 42 units of credit (double major) in a disciplinary stream specified as necessary preparation for Honours year studies, and

3.2 the completion of four specified courses (24 units of credit) in Year 4 in one of these disciplines, and a thesis (48 units of credit).

4. Approved Disciplinary Streams (Honours):

To the end of sixth year:

Accounting
Finance
Human Resource Management
Industrial Relations
Information Systems
Marketing
Taxation

Rules Relating to the Bachelor of Arts Component

1. Of the 108 units of credit in Arts and Social Sciences required for the combined degree:

(a) none may be from courses offered by the Faculty of Commerce and Economics;

(b) at least 24 and no more than 36 units of credit must be obtained in Level 1 courses, including no more than 12 Level 1 units of credit offered by any one school, department, unit or Interdisciplinary Program; and

(c) no more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program within the Faculty of Arts and Social Sciences.

2. Each student must complete a major sequence (42 units of credit) in one of the following areas within the Faculty of Arts and Social Sciences:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environment Studies
European Studies
Film and Theatre
French
German Studies
Greek (Modern)
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics

Music
Political Economy
Philosophy
Policy Studies
Politics and International Relations
Russian Studies
Sociology and Anthropology
Spanish and Latin American Studies
Women's and Gender Studies

*For complete listing of specialisations please refer to online handbook.

3527 Bachelor of Commerce Bachelor of Social Science

BCom BSocSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Faculty of Commerce and Economics in conjunction with the Faculty of Arts and Social Sciences offers the combined Bachelor of Commerce/ Bachelor of Social Science.

This is a five-year program combining the strengths and flexibility of each single degree program. It is expected that these combined programs will appeal to students wanting, in particular, a strong, focused and highly regarded business course that is complemented by a program of study in social research and policy analysis.

With approval, students with an excellent academic record may also enrol in an additional Honours year in the Bachelor of Commerce or Bachelor of Social Sciences.

Program Objectives and Learning Outcomes

Bachelor of Commerce

The objectives of the Bachelor of Commerce are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Bachelor of Arts

An Arts degree is a pathway through a wealth of knowledge in the humanities and social sciences. Its objective is to stimulate students intellectually; to immerse them in worlds of learning; and to graduate them as citizens with strong written and oral communications skills, the capacity to research, criticise and reflect, and the ability to work independently and collaboratively.

Program Structure

Year 1

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
SLSP1000	Social Science & Policy	(6 UOC)
SLSP1001	Research & Information Management	(6 UOC)
SLSP1002	Introduction to Policy Analysis	(6 UOC)

Years 2-5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 units of credit), 4 Arts and Social Sciences courses (24 units of credit) each year, including (in total) at least 36 units of credit from Social Science and Policy in the approved sequence as outlined in rules 11 and 12 for the Bachelor of Social Science degree.

Honours

Candidates for Honours must complete one year of study additional to the minimum of five years required for the BCom BSocSc at Pass level.

Honours in Commerce

Students wishing to take the Bachelor of Commerce at Honours level must consult the Head of School in which they wish to study for Honours. In addition to the Pass degree requirements the award with a degree of Honours requires:

1. The completion of at least 48 units of credit (single major) or 42 units of credit (double major) in a disciplinary stream specified as necessary preparation for Honours year studies, and
2. The completion of four specified courses in Honours year in one of these disciplines, and a thesis that is the equivalent of two courses.

Honours in Social Science

Students wishing to take the Bachelor of Social Science at Honours level must consult the Head of School of Social Science and Policy.

Academic Rules

Rules relating to the award of the degree of Bachelor of Commerce, shall apply wherever relevant to candidates for the course of Bachelor of Commerce/Bachelor of Social Science.

This is a five-year degree program (240 units of credit). Both the Bachelor of Commerce Bachelor of Social Science degree consists of 22 Commerce and Economics courses (132 units of credit), which include the core Year 1 Commerce and Economics courses, 18 Arts and Social Science courses (108 units of credit) including 8 which must be in Social Science and Policy. Students will typically enrol in 48 units of credit of courses per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Rules Relating to the Bachelor of Commerce Component

1. Each student must include the following in their degree program:
 - 1.1 either a major of at least 48 units of credit in an approved disciplinary stream (see below) and a minor of at least 24 units of credit from a different discipline; or
 - 1.2 a double major of 84 units of credit consisting of at least 42 units of credit in each of the (two) approved disciplinary streams.

The remaining Commerce and Economics course or units of credit requirements not required for a major sequence and not Year 1 core courses, as prescribed, if any, may be chosen from any other courses offered by the Faculty of Commerce and Economics.

2. Approved Disciplinary Streams (Pass):

Accounting
Actuarial Studies
Business Economics
Business Statistics
Business Strategy & Economic Management
Business Law
Economic History
Financial Economics
Finance
Human Resource Management
Industrial Relations
Information Systems
International Business
Management
Marketing
Taxation

3. Candidates for Honours must complete one year of study additional to the minimum of five years required for the BCom BSocSc at Pass level. Students wishing to take the Bachelor of Commerce at Honours level must consult the Head of School in which they wish to study for Honours. In addition to the Pass degree requirements the award with a degree of Honours requires:

- 3.1 the completion of at least 48 units of credit (single major) or 42 units of credit (double major) in a disciplinary stream specified as necessary preparation for Honours year studies, and
- 3.2 the completion of four specified courses in Honours year in one of these disciplines, and a thesis that is the equivalent of two courses.

4. Approved Disciplinary Streams (Honours):

To the end of sixth year:

Accounting
Finance
Human Resource Management
Industrial Relations
Information Systems
Marketing
Taxation

Rules Relating to the Bachelor of Social Science Component

1. Of the 108 units of credit in Arts and Social Sciences required for the combined degree:

(a) none may be from courses offered by the Faculty of Commerce and Economics;

(b) at least 24 and no more than 36 units of credit must be obtained in Level 1 courses, including no more than 12 Level 1 units of credit offered by any one school, department, unit or Interdisciplinary Program;

(c) level 1 courses must include SLSP1000 and SLSP1001 (12 units of credit) offered by the School of Social Science and Policy; and

(d) no more than 54 units of credit in total may be from any one school, department, unit or interdisciplinary program within the Faculty of Arts and Social Sciences;

(e) 48 units of credit must be taken as the approved stream as specified in List F for Bachelor of Social Science degree (refer to Arts and Social Sciences section of this Handbook), excluding those streams offered by the Faculty of Commerce and Economics

2. Candidates for Honours in Social Science must complete one year of study additional to the minimum of five years required for the BCom/BSocSc at Pass level. Students wishing to take the Bachelor of Social Science at Honours level must consult the Head of School of Social Science and Policy.

3529 Bachelor of Commerce Bachelor of Science

BCom BSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The University offers a four-year combined program leading to the award of the degrees of Bachelor of Commerce and Bachelor of Science.

This combined degree program will appeal to students wanting a strong, focused and highly regarded business course to complement a program of study in natural or physical sciences or mathematics. Students will complete a major stream in both a selected area of Science and an approved disciplinary stream in Commerce and Economics. Students are unable to take a modern language as a major stream. With approval, students with an appropriate academic record may also enrol in an additional Honours year in Commerce and Economics or in Science.

Students may choose Information Systems as a major in the BCom component only. In selecting their combination of majors, students should note that while there is a wide range of choice, not every combination can be completed in four years of full-time study.

Program Objectives and Learning Outcomes

The objectives of the Bachelor of Commerce are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Bachelor of Science

This program has been designed to:

- develop and sustain an interest in and knowledge of Science;

- develop a working knowledge of scientific methods of investigation;
- encourage curiosity and creative imagination and an appreciation of the role of speculation in the selection and solution of problems, the construction of hypotheses, and the design of experiments;
- develop an appreciation of scientific criteria and a concern for objectivity and precision;
- develop confidence and skill in formulating problems and in treating both qualitative and quantitative data;
- develop the ability and disposition to think logically, to communicate clearly by written and oral means, and to read critically and with understanding;
- develop the habit of seeking and recognising relationships between phenomena, principles, theories, conceptual frameworks and problems;
- promote understanding of the significance of science, technology, economics and social factors in modern society, and of the contributions they can make in improving material conditions;
- provide opportunities for the development of students' motivations and social maturity, and an awareness of their capabilities in relation to a choice of career which will be fruitful to themselves and to society;
- provide opportunity to study science in combination with other disciplines.

Program Structure

Core Courses

All students must complete the following courses:

ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)

6 units of credit of First Year mathematics courses as specified for the appropriate Science program and;

At least 6 units of credit of Statistics selected from:

ACTL2002	Probability & Statistics for Actuaries	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
MATH1041	Statistics for Life & Social Sciences	(6 UOC)
MATH2801	Theory of Statistics	(6 UOC)
MATH2841	Statistics SS	(6 UOC)
MATH2901	Higher Theory of Statistics	(6 UOC)
PSYC2001	Research Methods 2	(6 UOC)

or alternatives Statistics courses approved by the program advisor.

All students in the combined degree program must complete at least 12 units of credit of courses from Commerce and at least 12 units of credit of courses from an approved Science program within the first 2 sessions of full-time enrolment (or within the first 48 units of credit of courses completed).

Within the first 4 sessions of full-time study (or the first 96 units of credit completed), all students must complete 36 units of credit of courses from an approved Science program and 36 units of credit of courses taught by the Faculty of Commerce and Economics, including compulsory courses listed above.

Honours

Candidates for Honours must complete one year of study additional to the minimum required for the BCom BSc at Pass Level.

Honours in Commerce

Students wishing to take the Bachelor of Commerce at Honours level must consult the Head of School in which they wish to study for Honours. For the rules relating to Honours in Commerce, please refer to the program entry for 3502 Bachelor of Commerce.

Honours in the Science

Candidates for Honours in the Science component of the combined degree program will need to undertake an additional year of study as prescribed by the relevant school, and to fulfill prerequisite conditions for undertaking Honours as listed for each approved major. Students who wish to undertake Honours in Science should consult the Head of the School in which they wish to undertake Honours prior to their third year of study.

Academic Rules

Entry to the course will be by quota with the admission requirements being not less than those for the degree with the highest requirements

(currently the Bachelor of Commerce degree) and also with the HSC admission requirements for the Bachelor of Science (3970). There is no automatic transfer between Bachelor of Science or Bachelor of Commerce and Bachelor of Commerce Bachelor of Science programs. Students may apply to transfer between these programs through UAC if they are local students and through the UNSW Admissions Office if they are International students.

For the award of the degrees of BCom BSc, the following requirements must be satisfied:

- Completion of 192 units of credit including:
- At least 84 units of credit from the courses offered by the Faculty of Commerce and Economics and 84 units of credit from courses for the BSc.
- Completion of the required courses for a single major in one of the approved areas of study in the Faculty of Commerce and Economics, as listed in this Handbook. Students are unable to take a modern language as a major stream.
- Completion of the required courses for a major in one approved Science discipline. Available majors for the science component are listed in Table A in the Science section of the Handbook. A Computer Science major may only be undertaken with the permission of the School of Computer Science and Engineering.

At the discretion of the program authority, variations to course requirements within individual programs may be approved.

Rules Relating to the Bachelor of Commerce Component

1. Each student must complete the core courses listed above and the requirements listed for a single major in an approved Disciplinary Stream under Rule 9 for the BCom degree. The remaining units of credit required to satisfy the Commerce component may be chosen from any other undergraduate courses taught by the Faculty of Commerce and Economics.

2. Candidates for Honours must complete one year of study additional to the minimum required for the BCom BSc at Pass Level. Students wishing to take the Bachelor of Commerce at Honours level must consult the Head of School in which they wish to study for Honours. In addition to the Pass degree requirements, the award with a degree of Honours requires:

2.1 the completion of a major of at least 48 units of credit in a disciplinary stream specified as necessary preparation for Honours year studies, and

2.2 the completion of a program prescribed for an approved disciplinary stream in the Honours year. Approved disciplinary streams (Honours) are listed under Rule 9 for BCom in the Faculty of Commerce and Economics section of this Handbook.

2.3 In the Commerce/Science degree Students can do no more than 6/7 Commerce Level 1 courses.

Rules Relating to the Bachelor of Science Component

3. Of the minimum 84 units of credit in courses related to an approved program of study in Science for the combined degree:

3.1 None may be from courses offered by the Faculty of Commerce and Economics.

3.2 Students must complete 24 units of credit of level 1 courses offered by Science schools. No more than 18 units of credits of level 1 can be from any one course area.

3.3 Students must complete the prescribed courses for an approved major as listed in Table A of the Science Handbook or with approval, Computer Science. Remaining courses to make up the minimum 84 units of credit in Science courses should be selected from the relevant optional courses as listed for each eligible Science program in Table A.

4. Candidates for Honours in the Science component of the combined degree program will need to undertake an additional year of study as prescribed by the relevant School, and to fulfill prerequisite conditions for undertaking Honours as listed for each approved major. Students who wish to undertake Honours in Science should consult the Head of the School in which they wish to undertake Honours prior to their third year of study.

3526 Bachelor of Economics Bachelor of Arts

BEC BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Faculty of Commerce and Economics in conjunction with the Faculty of Arts and Social Sciences offers the combined Bachelor of Economics Bachelor of Arts.

This is a five-year program combining the strengths and flexibility of each single degree program. It is expected that these combined degree program will appeal to students wanting, in particular, a strong, focused and highly regarded business program that is complemented by a humanities discipline - chosen out of personal interest or with a particular career objective in mind.

With approval, students with an excellent academic record may also enrol in an additional Honours year in the Bachelor of Economics degree.

The combined Bachelor of Economics Bachelor of Arts is a five-year (240 units of credit) degree program. The Bachelor of Economics Bachelor of Arts program consists of 22 Commerce and Economics courses (132 units of credit) and 18 Arts and Social Science courses (108 units of credit). Students will typically enrol in 48 units of credit per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Program Objectives and Learning Outcomes**Bachelor of Economics**

The objectives of the Bachelor of Economics are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Bachelor of Arts

An Arts degree is a pathway through a wealth of knowledge in the humanities and social sciences. Its objective is to stimulate students intellectually; to immerse them in worlds of learning; and to graduate them as citizens with strong written and oral communications skills, the capacity to research, criticise and reflect, and the ability to work independently and collaboratively.

Program Structure**Year 1** (48 units of credit)

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
Level 1 Arts and Social Science courses		(12 UOC)

Years 2-5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 units of credit), 4 Arts and Social Sciences courses (24 units of credit) each year.

Honours

Candidates for Honours must complete one year of study additional to the minimum of five years required for the BEc BA at Pass level.

Honours in Economics

Students wishing to take the Bachelor of Economics at Honours level must consult the Head of School and/or Head of Department in which they wish to study for Honours. In addition to the Pass degree requirements the award with a degree of Honours requires:

1. The completion of at least 60 units of credit (single major) or 48 units of credit (double major) in Economics, Econometrics or Economic History disciplinary streams specified as necessary preparation for Honours year studies, and
2. The completion of four specified courses in the Honours year (24 units of credit), and a thesis that is the equivalent of 24 units of credit.

Honours studies may proceed in more than one disciplinary stream prior to the Honours year. In the Honours year, Honours may be taken in the

Economics, Econometrics or Economic History disciplinary streams, or a combined Honours program in Economics and Econometrics may be taken.

Academic Rules

Rules relating to the award of the degree of Bachelor of Economics shall apply wherever relevant to students enrolled in the combined Bachelor of Economics Bachelor of Arts.

This is a five-year (240 units of credit) degree program. The Bachelor of Economics Bachelor of Arts program consists of 22 Commerce and Economics courses (132 units of credit) and 18 Arts and Social Sciences courses (108 units of credit). Students will typically enrol in 48 units of credit per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Rules Relating to the Bachelor of Economics Component

1. Each student must include the following in their degree program:

1.1 either a major of at least ten courses (60 units of credit) in Economics, Econometrics or Economic History disciplinary stream (including courses taken as core studies); or

1.2 a double major of fifteen courses (90 units of credit), with at least eight courses (48 units of credit) in one of the Economics, Econometrics or Economic History disciplinary streams and at least seven courses (42 units of credit) in another approved disciplinary stream.

The remaining Commerce and Economics course or credit requirements not required for a major sequence and not Year 1 core courses, as prescribed, if any, may be chosen from any other courses offered by the Faculty of Commerce and Economics.

2. Approved Disciplinary Streams (Pass):

Accounting
Asian Studies#
Business Law
Economics
Economics/ Econometrics
Econometrics
Economic History
Finance
Financial Economics
Human Resource Management
Industrial Relations
Information Systems
International Business
Management
Marketing
Taxation

#Available as a co-major integrated program with Economics only

3. Candidates for Honours must complete one year of study additional to the minimum of five years required for the BEc BA at Pass level. Students wishing to take the Bachelor of Economics at Honours level must consult the Head of School and/or Head of Department in which they wish to study for Honours. In addition to the Pass degree requirements the award with a degree of Honours requires:

3.1 the completion of at least 60 units of credit (single major) or 48 units of credit (double major) in Economics, Econometrics or Economic History disciplinary streams specified as necessary preparation for Honours year studies, and

3.2 the completion of four specified courses in the Honours year (24 units of credit), and a thesis that is the equivalent of 24 units of credit.

Honours studies may proceed in more than one disciplinary stream prior to the Honours year. In the Honours year, Honours may be taken in the Economics, Econometrics or Economic History disciplinary streams, or a combined Honours program in Economics and Econometrics may be taken.

4. Approved Disciplinary Streams (Honours):

Economics
Econometrics
Economics/Econometrics
Economic History

Rules Relating to the Bachelor of Arts Component

1. Of the 108 units of credit in Arts and Social Sciences required for the combined degree:

(a) none may be from courses offered by the Faculty of Commerce and Economics;

(b) at least 24 and no more than 36 units of credit must be obtained in Level 1 courses, including no more than 12 Level 1 units of credit offered by any one School, Department, Unit or Interdisciplinary Program; and

(c) no more than 54 units of credit in total may be from any one School, Department, Unit or Interdisciplinary Program within the Faculty of Arts and Social Sciences.

2. Each student must complete a major sequence (42 units of credit) in one of the following areas within the Faculty of Arts and Social Sciences:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environment Studies
European Studies
Film and Theatre
French
German Studies
Greek (Modern)
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture and Technology
Music
Political Economy
Philosophy
Policy Studies
Politics and International Relations
Russian Studies
Sociology and Anthropology
Spanish and Latin American Studies
Women's and Gender Studies

3528 Bachelor of Economics Bachelor of Social Science

BEC BSocSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Faculty of Commerce and Economics in conjunction with the Faculty of Arts and Social Sciences offers the combined Bachelor of Economics/ Bachelor of Social Science.

This is a five-year program combining the strengths and flexibility of each single degree program. It is expected that this combined program will appeal to students wanting, in particular, a strong, focused and highly regarded business course that is complemented by a program of study in social research and policy analysis.

With approval, students with an excellent academic record may also enrol in an additional Honours year in the Bachelor of Economics or Bachelor of Social Science degree.

Program Objectives and Learning Outcomes

Bachelor of Economics

The objectives of the Bachelor of Economics are:

- To develop understanding of institutional structures and processes supporting global commerce;
- To develop disciplinary skills and perspectives relevant to global commerce;
- To develop professional competences and ethical perspectives relevant to practice in global contexts;
- To develop understandings of alternative ways in which knowledge can be created and effectively deployed;
- To develop capacities for life-long learning and the negotiation of change.

Bachelor of Arts

An Arts degree is a pathway through a wealth of knowledge in the humanities and social sciences. Its objective is to stimulate students intellectually; to immerse them in worlds of learning; and to graduate them as citizens with strong written and oral communications skills, the capacity to research, criticise and reflect, and the ability to work independently and collaboratively.

Program Structure

Year 1

ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
SLSP1000	Social Science & Policy	(6 UOC)
SLSP1001	Research & Information Management	(6 UOC)
SLSP1002	Introduction to Policy Analysis	(6 UOC)

Years 2-5

In Years 2, 3, 4 and 5 students take a total of 4 Commerce and Economics courses (24 units of credit), 4 Arts and Social Sciences courses (24 units of credit) each year, including (in total) at least 36 units of credit from Social Science and Policy in the approved sequence as outlined in rules 11 and 12 for the Bachelor of Social Science degree.

Honours

Candidates for Honours must complete one year of study additional to the minimum of five years required for the BEc BSocSc at Pass level.

Honours in Economics

In addition to the Pass degree requirements the award with a degree of Honours requires:

1. The completion of at least 60 units of credit (single major) or 48 units of credit (double major) in Economics, Econometrics, Economic History or Financial Economics disciplinary streams specified as necessary preparation for Honours year studies, and
2. The completion of four specified courses in the Honours year in one of these disciplines, and a thesis that is the equivalent of two courses.

Honours in Social Science

Students wishing to take the Bachelor of Social Science at Honours level must consult the Head of School of Social Science and Policy.

Academic Rules

Rules relating to the award of the degree of Bachelor of Economics, shall apply wherever relevant to candidates for the course of Bachelor of Economics Bachelor of Social Science.

This is a five-year degree program (240 units of credit). The Bachelor of Economics Bachelor of Social Science degree consists of 22 Commerce and Economics courses (132 units of credit), which include the core Year 1 Commerce and Economics courses, 18 Arts and Social Science courses (108 units of credit) including 8 which must be in Social Science and Policy. Students will typically enrol in 48 units of credit of courses per year.

Students may be admitted direct to the program in Year 1 or can apply for admission in Years 2 or 3.

Rules Relating to the Bachelor of Economics Component

1. Each student must include the following in their degree program:

1.1 either a major of at least 60 units of credit in Economics, Econometrics, Economic History, or Financial Economics (including courses taken as core studies); or

1.2 a double major of 90 units of credit consisting of at least 48 units of credit in one of Economics, Econometrics, Economic History or Financial Economics disciplinary streams, and at least 42 units of credit in another disciplinary stream.

The remaining Commerce and Economics course or credit point requirements not required for a major sequence and not Year 1 core courses, as prescribed, if any, may be chosen from any other courses offered by the Faculty of Commerce and Economics.

2. Approved Disciplinary Streams (Pass):

Accounting
Asian Studies#
Business Law

Economics
Econometrics
Economic History
Financial Economics
Finance
Human Resource Management
Industrial Relations
Information Systems
International Business
Management
Marketing
Taxation

#Not available as a single major, but as a co-major only

3. Candidates for Honours must complete one year of study additional to the minimum of five years required for the BEc BSocSc at Pass level. In addition to the Pass degree requirements the award with a degree of Honours requires:

3.1 the completion of at least 60 units of credit (single major) or 48 units of credit (double major) in Economics, Econometrics, Economic History or Financial Economics disciplinary streams specified as necessary preparation for Honours year studies, and

3.2 the completion of four specified courses in the Honours year in one of these disciplines, and a thesis that is the equivalent of two courses.

4. Approved Disciplinary Streams (Honours):

To the end of sixth year:

Economics
Econometrics
Economics/Econometrics
Economic History

Rules Relating to the Bachelor of Social Science Component

1. Of the 108 units of credit in Arts and Social Sciences required for the combined degree:

(a) none may be from courses offered by the Faculty of Commerce and Economics;

(b) at least 24 and no more than 36 units of credit must be obtained in Level 1 courses, including no more than 12 Level 1 credit points offered by any one school, department, unit or Interdisciplinary Program;

(c) level 1 courses must include SLSP1000 and SLSP1001 (12 units of credit) offered by the School of Social Science and Policy; and

(d) no more than 54 units of credit in total may be from any one school, department, unit or Interdisciplinary Program within the Faculty of Arts and Social Sciences;

(e) 48 units of credit must be taken as the approved stream as specified in List F for the Bachelor of Social Science degree, excluding those streams offered by the Faculty of Commerce and Economics

2. Candidates for Honours in Social Science must complete one year of study additional to the minimum of five years required for the BEc/BSocSc at Pass level. Students wishing to take the Bachelor of Social Science at Honours level must consult the Head of School of Social Science and Policy.

Plan Rules and Information

Select sufficient courses to make up minor, co-major or single major requirements, or select single courses as options, as appropriate. Refer to the preceding section which lists the rules governing the award of degrees for details. Refer to the 'Course Descriptions' section of this Handbook for further details such as course prerequisites.

Accounting

Course ID	Course Name
ACCT1501	Accounting & Financial Management 1A*
ACCT1511	Accounting & Financial Management 1B*
ACCT2522	Management Accounting: Process Improvement and Innovation*
ACCT2542	Corporate Financial Reporting and Analysis*
ACCT3563	Issues in Financial Reporting and Analysis *
or	
ACCT3573	Issues in Financial Reporting and Analysis (Honours)*
ACCT3583	Stakeholder Value Management
ACCT3585	E-Business: Strategy and Processes
ACCT3593	Stakeholder Value Management (Honours)
ACCT3601	Global Financial Reporting and Analysis
ACCT3610	Financial Statement Analysis

ACCT3708	Auditing and Assurance Services
ACCT3718	Auditing and Assurance Services (Honours)
ACCT4820	Management Accounting Issues and International Best Practice
FINS3626	International Corporate Governance

* Required for Accounting major

Accounting Honours

This program is available to the end of Year 3 only for BEc students and to the end of fourth year for BCom students only.

Required Prior to Year 4

ACCT3573	Issues in Financial Reporting and Analysis (Honours)
ACCT3593	Stakeholder Value Management (Honours)
ACCT3718	Auditing and Assurance Services (Honours)

Year 4

ACCT4794	Thesis (Accounting)
ACCT4809	Current Developments in Auditing Research
ACCT4851	Current Developments in Accounting Research –Financial
ACCT4852	Current Developments in Accounting Research –Managerial
ACCT4897	Seminar in Research Methodology

Accounting Co-op Program

This program is available as a single major or combined with Finance or Business Economics in the BCom degree only.

Entry to the program is at first year only and through the scholarship selection procedures administered by the Co-op Program Office.

This is a four-year degree program.

Required

ACCT8691	Industrial Training 1
ACCT8692	Industrial Training 2
ACCT8693	Industrial Training 3

Students may not enrol in any courses concurrently with any of these required courses without the permission of the School of Accounting Co-op Program Coordinator.

Course List

ACCT1501	Accounting and Financial Management 1A*
ACCT1511	Accounting & Financial Management 1B*
ACCT2522	Management Accounting: Process Improvement and Innovation*
ACCT2542	Corporate Financial Reporting and Analysis*
ACCT3563	Issues in Financial Reporting and Analysis *
or	
ACCT3573	Issues in Financial Reporting and Analysis (Honours)*
ACCT3583	Stakeholder Value Management
ACCT3585	E-Business: Strategy and Processes
ACCT3593	Stakeholder Value Management (Honours)
ACCT3601	Global Financial Reporting and Analysis
ACCT3610	Financial Statement Analysis
ACCT3708	Auditing and Assurance Services
ACCT3718	Auditing and Assurance Services (Honours)
ACCT4820	Management Accounting Issues and International Best Practice
FINS3626	International Corporate Governance

*Required for Accounting major

Actuarial Studies

Core required:

The actuarial major requires students to substitute approved Mathematics courses in place of ECON1202 and ECON1203 as 1st year core courses. Students will normally be required to complete:

MATH1151	Mathematics for Actuarial Studies and Finance 1A
MATH1251	Mathematics for Actuarial Studies and Finance 1B

unless approval from the Head of Actuarial Studies is obtained.

Required

ACTL1001	Actuarial Studies and Commerce
ACTL2001	Financial Mathematics
ACTL2002	Probability and Statistics for Actuaries
ACTL2003	Stochastic Models for Actuarial Applications

To satisfy minimum requirements for an actuarial studies minor, all courses from the required list must be completed.

Options

ACTL3001	Actuarial Statistics
ACTL3002	Life Insurance and Superannuation Models
ACTL3003	Insurance Risk Models
ACTL3004	Financial Economics for Insurance and Superannuation
ACTL3005	Superannuation and Retirement Benefits

To obtain maximum actuarial professional examination exemptions, the first four options should be completed along with ACCT2542, ECON2101 and FINS1613.

Actuarial Studies Honours

BCom Honours Actuarial Studies

ACTL4000	Actuarial Studies Thesis (full year)	(24 UOC)
ACTL4003	Research Topics in Actuarial Science (Session 1)	(6 UOC)
ACTL4001	Actuarial Theory and Practice A (Session 1)	(6 UOC)
ACTL4002	Actuarial Theory and Practice B (Session 2)	(6 UOC)
Option approved by the Head of Actuarial Studies		(6 UOC)

Actuarial Studies Co-op Program

This program is available only to students admitted through the scholarship selection procedures administered by the Co-op Program office. Entry to the program is at first year only.

This is a four-year degree program combining the requirements of the BCom with coordinated industrial experience. Industrial experience extends outside university sessions.

Required

ACTL1001	Actuarial Studies and Commerce
ACTL2001	Financial Mathematics
ACTL2002	Probability and Statistics for Actuaries
ACTL2003	Stochastic Models for Actuarial Applications
ACTL2100	Industrial Training 1 (Year 2–12 wks)
ACTL3100	Industrial Training 2 (Year 3–26 wks)
ACTL4100	Industrial Training 3 (Year 4–26 wks)

Options

To satisfy minimum requirements of the Actuarial Studies Co-op Program, the following courses must be completed.

List A

ACTL3001	Actuarial Statistics
ACTL3002	Life Insurance and Superannuation Models
ACTL3003	Insurance Risk Models
ACTL3004	Financial Economics for Insurance and Superannuation
ACCT2542	Corporate Financial Reporting and Analysis
ECON2101	Microeconomics 2
or	
ECON2102	Macroeconomics 2
FINS1613	Business Finance

Rules Governing the Award of the Degree of Bachelor of Commerce (Actuarial Studies Co-op)**Rule 1 – Pass Degree**

The degree of Bachelor of Commerce (Actuarial Studies Co-op) may be conferred as a Pass degree. In cases of superior academic performance throughout the course, the Pass degree will be conferred with Distinction.

Rule 2 – Disciplinary Minors

Students not completing the requirements of a double major in the program must choose options so that they complete a 'disciplinary minor' in a discipline other than Actuarial Studies. A 'disciplinary minor' is defined as four approved session courses to the value of 24 units of credit, or equivalent value for courses taught outside the faculty, of which no more than 12 units may be first year courses.

Rule 3 – Entry and Continuation Conditions

3.1 Entry to the program is conditional upon:

- meeting the entry requirements for the Bachelor of Commerce
- the selection process for Co-op Scholarships

3.2 Except in exceptional circumstances, continuation in the program is conditional upon meeting the performance standards required to maintain the Co-op Scholarship.

Students who lose their scholarship and are therefore excluded from continuing in the program will be transferred to a Bachelor of Commerce generalist degree program.

Rule 4 – Assessable Hours

4.1 On Campus Courses: Normal workload expectations for courses run in "on campus" mode are a minimum of 25 hours per session per unit of credit, including class contact hours, preparation and time spent on all assessable work.

4.2 Industrial Training: Normal workload expectations for industrial training courses are a minimum of the normal working hours per week for the site at which the student is based for the duration of the course.

Rule 5 – Passing in a Course

Where, in the following rules, reference is made to the requirement that a student shall pass a course, the requirement shall be construed as meaning that the student shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of School concerned.

Rule 6 – Normal Program

This program leading to the award of the degree of Bachelor of Commerce (Actuarial Studies Co-op) comprises 192 units of credit to be completed over a period of four academic years.

Except in exceptional circumstances, a student must enrol in a minimum of 12 units per session and will not be permitted to enrol for more than 24 units other than in the first session of Year 2 when Industrial Training 1 is completed along with 24 units of credit during the session.

Except in exceptional circumstances, students are required to undertake the Industrial Training Courses (having met all prerequisites) at the following times:

Industrial Training 1 at the commencement of the first half of their second year

Industrial Training 2 in the second half of their third year

Industrial Training 3 in the first half of their fourth year

Rule 7 – Minimum Time for Completion

The minimum time for completing the requirements for the degree is normally eight sessions full-time.

Rule 8 – Academic Program Requirements

To complete the requirements for the award of the degree a student must complete and pass 192 units of credit which shall include:

8.1 The compulsory courses set out in the program requirements.

8.2 12 units of approved General Education courses offered by faculties other than the Faculty of Commerce and Economics.

8.3 Either:

8.3.1 a major of at least 48 units in Actuarial Studies, in addition to Industrial Training units, and a minor in another approved disciplinary stream;

or

8.3.2 a major of at least 42 units in Actuarial Studies, in addition to Industrial Training and a second major of 42 units in another approved disciplinary stream.

8.4 A student cannot:

8.4.1 count more than 60 units of Level 1 core and electives courses towards their degree unless in exceptional circumstances;

8.4.2 attempt General Education courses until they have attempted 48 units of mainstream courses;

8.4.3 count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of General Education requirements;

8.4.4 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

Asian Studies (BEC students only)

This major is available only as a co-major integrated with the program in Economics.

Required

(i) Students must enrol in and pass enough language units to reach a standard equivalent to intermediate level. If a student has satisfactory HSC competence in the language this will require two courses, if not four. In the case of the Japanese language, students entering without HSC competence should enrol in four consecutive core units of Japanese beginning with JAPN1000 Japanese Communication 1A. Students entering the Japanese language program with HSC, or above, competence will be admitted to a suitable level, subject to a placement test.

(ii) Students must enrol in and pass at least six units relating to a particular country or group of countries as approved by the Head of School. These may include language courses and must include at least two economics courses, one of which may be ECON2305 Modern Asian Economic History.

Business Economics (BCom students only)

Required

ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1

Options (may be selected from List A or List B)

To satisfy either single or double major requirements, at least two Options must be chosen from List B.

List A

ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2105	Economics of Corporations
ECON2107	The Economics of Information and Technology
ECON2109	Economics of Natural Resources
ECON2111	Globalisation
ECON2112	Game Theory and Business Strategy
ECON2113	Economics of e-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2117	Economics of Tourism
ECON2127	Environmental Economics
ECON2206	Introductory Econometrics
ECON2305	Modern Asian Economic History
ECON2313	Australian Economic Development
ECON2322	European Integration

List B

ECON2207	Econometric Methods
ECON3101	Markets and Public Choice
ECON3104	International Macroeconomics
ECON3106	Public Finance
ECON3107	Economics of Finance
ECON3109	Economic Growth, Technology and Structural Change
ECON3110	Development Economics
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
ECON3114	Superannuation and Retirement Benefits
ECON3116	International Economics
ECON3119	Political Economy
ECON3120	Economic Reasoning
ECON3121	Managerial Economics
ECON3202	Mathematical Economics
ECON3203	Econometric Theory
ECON3204	Econometric Model Building
ECON3206	Financial Econometrics

Business Economics Honours (BCom students only)

Year 4

Required

ECON4100	Advanced Economic Analysis
ECON4127	Economics Thesis

Plus three further courses from:

ECON4101	International Trade
ECON4102	Industrial Organisation
ECON4103	Business Cycles And Growth
ECON4104	Economics of Labour Markets
ECON4105	Seminar in Research Methods
ECON4106	Policy Evaluation Methods
ECON4201	Applied Econometrics

In certain circumstances and with the permission of the Head of School, one course from List B of the Economics disciplinary stream, or a 4th year course from any school in FCE may be substituted for one of the Fourth Year Honours options.

For each course the UOC is 6, except ECON4127 for which the UOC is 24.

Business Law

This stream is not available as a single major, but as a co-major only. This stream is not available with the co-major in Taxation.

Required

LEGT1711	Legal Environment of Commerce
LEGT2721	Business Transactions
LEGT2741	Business Entities

Options

Four courses from the following list:

LEGT2791	International Business Law
LEGT2712	Business, Ethics and the Law
LEGT2731	Marketing and Distribution Law
LEGT2732	Franchising
LEGT2751	Business Taxation
LEGT2761	Law of Banking and Finance
LEGT2771	Information Technology Law
LEGT2781	Regulation of Government Agencies
LEGT2756	International Business Taxation
LEGT3757	Corporate Law, Tax and Strategy
LEGT2744	Corporate Fraud and Crime
LEGT4721	Special Topic in Business Law

Note: Other courses offered by the School of Business Law and Taxation may be substituted for the optional courses listed above with approval of the Head of School.

Business Statistics (BCom students only)

Required

ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B

Options (may be selected from List A or List B)

To satisfy either single or double major requirements, at least two Options must be chosen from List B.

List A

ECON2206	Introductory Econometrics
ECON2208	Operations Research
ECON2209	Business Forecasting

List B

ECON2207	Econometric Methods
ECON2215	Statistics for Econometrics
ECON3202	Mathematical Economics
ECON3203	Econometric Theory
ECON3206	Financial Econometrics

Business Strategy & Economic Management (BCom students only)

Required

ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON2101	Microeconomics 2
ECON2105	Economics of Corporations
ECON2112	Game Theory and Business Strategy
ECON3121	Managerial Economics

Options

ACCT2522	Management Accounting: Process Improvement and Innovation
ECON2102	Macroeconomics 2
ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2107	The Economics of Information and Technology
ECON2113	Economics of e-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2206	Introductory Econometrics
ECON2207	Econometric Methods
ECON2208	Operations Research
ECON2209	Business Forecasting
ECON3101	Markets and Public Choice
ECON3106	Public Finance
INFS3603	Business Intelligence Systems
INFS3685	Electronic Commerce Management
MARK3071	International and Global Marketing
MARK3082	Strategic Marketing Management
MGMT2101	International Business and Multinational Enterprises
MGMT3101	International Business Strategy
MGMT3724	Strategic Human Resource 1 Management

Business Strategy and Economic Management Honours (BCom students only)

Year 4

Required

ECON4127	Economics Thesis
ECON4102	Industrial Organisation

Plus three further courses from:

ECON4100	Advanced Economic Analysis
ECON4101	International Trade
ECON4103	Business Cycles and Growth
ECON4201	Applied Econometrics
ECON4104	Economics of Labour Markets
ECON4105	Seminar in Research Methods
ECON4106	Policy Evaluation Methods

In certain circumstances and with the permission of the Head of School, one third year option course from the option list for the Business Strategy and Economic Management disciplinary stream, or a 4th year course from any school in the FCE, may be substituted for one of the Fourth Year Honours options.

For each course the UOC is 6, except ECON4127 for which the UOC is 24.

Economics (BEc students only)

Required

ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2206	Introductory Econometrics
ECON2207	Econometric Methods

Options (may be selected from List A or List B)

To satisfy single major requirements, students must do three Options from List B.

To satisfy double major requirements, at least two Options must be chosen from List B.

List A

ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2105	Economics of Corporations
ECON2107	The Economics of Information and Technology
ECON2109	Economics of Natural Resources
ECON2111	Globalisation
ECON2112	Game Theory and Business Strategy
ECON2113	Economics of e-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2117	Economics of Tourism
ECON2127	Environmental Economics
ECON2305	Modern Asian Economic History
ECON2313	Australian Economic Development
ECON2322	European Integration
ECON3106	Public Finance
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
ECON3119	Political Economy

List B

ECON3101	Markets and Public Choice
ECON3104	International Macroeconomics
ECON3107	Economics of Finance
ECON3109	Economic Growth, Technology & Structural Change
ECON3110	Development Economics
ECON3114	Superannuation and Retirement Benefits
ECON3116	International Economics
ECON3120	Economic Reasoning
ECON3121	Managerial Economics
ECON3202	Mathematical Economics
ECON3204	Econometric Model Building
ECON3203	Econometric Theory
ECON3206	Financial Econometrics

Economics Honours (BEc students only)

Year 4

Required

ECON4100	Advanced Economic Analysis
ECON4127	Economics Thesis

Plus three further courses from:

ECON4101	International Trade
ECON4102	Industrial Organisation
ECON4103	Business Cycles and Growth
ECON4104	Economics of Labour Markets
ECON4106	Policy Evaluation Methods
ECON4201	Applied Econometrics

In certain circumstances and with the permission of the Head of School, one course from List B of the Economics disciplinary stream may be substituted for one of the Fourth Year Honours options.

Econometrics (BEc students only)

Required (for single major)

ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B
ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2206	Introductory Econometrics
ECON2207	Econometric Methods
ECON2215	Statistics for Econometrics
ECON3203	Econometric Theory

Options

ECON2208	Operations Research
ECON2209	Business Forecasting
ECON3202	Mathematical Economics
ECON3204	Econometric Model Building
ECON3206	Financial Econometrics

Required (for double major)

ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B
ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2206	Introductory Econometrics
ECON2207	Econometric Methods
ECON2215	Statistics for Econometrics
ECON3203	Econometric Theory

Econometrics Honours (BEc students only)

Year 4

Required

ECON4100	Advanced Economic Analysis
ECON4201	Applied Econometrics
ECON4202	Advanced Econometric Theory
ECON4227	Thesis (Econometrics)

Plus one option from the Economics Fourth Year Honours options list.

Economics/Econometrics (BEc students only)

Required

ECON1101	Microeconomics 1
ECON1102	Macroeconomics 1
ECON1202	Quantitative Methods A
ECON1203	Quantitative Methods B
ECON2101	Microeconomics 2
ECON2102	Macroeconomics 2
ECON2206	Introductory Econometrics
ECON2207	Econometric Methods
ECON2215	Statistics for Econometrics
ECON3203	Econometric Theory

Plus at least one option in Econometrics (from the list below), and at least three options in Economics (List B).

Options

At least one of:

ECON2208	Operations Research
ECON2209	Business Forecasting
ECON3202	Mathematical Economics
ECON3204	Econometric Model Building
ECON3206	Financial Econometrics

Economics/Econometrics Honours (BEc students only)

Year 4

Required

ECON4100	Advanced Economic Analysis
ECON4201	Applied Econometrics

ECON4202 Advanced Econometric Theory
ECON4227 Thesis (Econometrics)

Plus one option from the Economics Fourth Year Honours options list.

Economic History (BCom students only)

Required

ECON1101 Microeconomics 1
ECON1102 Macroeconomics 1

Options

ECON1301 Australia in the Global Economy
ECON1302 Australia and the Asia-Pacific Economies
ECON2305 Modern Asian Economic History
ECON2313 Australian Economic Development
ECON2319 Economic & Social Policy in Australia Since Federation
ECON2321 Growth and Development of International Business
ECON2322 European Integration

Economic History (BEc students only)

Required

ECON1101 Microeconomics 1
ECON1102 Macroeconomics 1
ECON2101 Microeconomics 2
ECON2102 Macroeconomics 2
ECON2206 Introductory Econometrics

Options

ECON1301 Australia in the Global Economy
ECON1302 Australia and the Asia-Pacific Economies
ECON2305 Modern Asian Economic History
ECON2313 Australian Economic Development
ECON2319 Economic and Social Policy in Australia since Federation
ECON2321 Growth and Development of International Business
ECON2322 European Integration

Economic History Honours (BEc students only)

Year 4

Required

ECON4321 Economic History for Honours
ECON4327 Thesis (Economic History)

Financial Economics (BCom and BEc students)

Required

ECON2101 Microeconomics 2
ECON3107 Economics of Finance
ECON2206 Introductory Econometrics
ECON2209 Business Forecasting
ECON3206 Financial Econometrics
FINS1612 Capital Markets & Institutions

Options

ECON2102 Macroeconomics 2
ECON2104 Applied Macroeconomics
ECON2112 Game Theory and Business Strategy
ECON2207 Econometric Methods
ECON2208 Operations Research
ECON2215 Statistics for Econometrics
ECON3101 Markets and Public Choice
ECON3104 International Macroeconomics
ECON3114 Superannuation and Retirement Benefits
ECON3202 Mathematical Economics
ECON3203 Econometric Theory
ECON3204 Econometric Model Building
FINS1613 Business Finance
FINS2622 Emerging Capital Markets

Financial Economics Honours (BCom students only)

Year 4

Required

ECON4127 Economic Thesis

Plus four further courses from:

ECON4100 Advanced Economic Analysis
ECON4101 International Trade
ECON4102 Industrial Organisation
ECON4103 Business Cycles and Growth
ECON4104 Economics of Labour Markets
ECON4106 Policy Evaluation Methods

Finance

Required

FINS1612 Capital Markets and Institutions
FINS1613 Business Finance
FINS2624 Portfolio Management
FINS3616 International Business Finance

Students specialising in Finance only or Finance and another discipline should take the above four compulsory Finance courses in the first two years (first year and first semester of the second year) so that they can complete as many Finance courses as possible in the area of **Banking, Corporate Finance, Investment Management, International Finance, Risk Management and Financial Analysis** during their second and third years. To meet minor requirements, students must complete FINS1613 and 3 other required or optional courses.

Year 1

FINS1612 Capital Markets and Institutions
FINS1613 Business Finance

Year 2

FINS2624 Portfolio Management
FINS3616 International Business Finance

And optional Finance courses from the list below, in the areas of:

Banking
Corporate Finance
Investment Management
International Finance
Risk Management
Financial Analysis

Year 3

Optional Finance courses from the list below, in the areas of:

Banking
Corporate Finance
Investment Management
International Finance
Risk Management
Financial Analysis

To satisfy single major requirements, at least three options must be chosen from the following options. To satisfy double major requirements, at least two options must be chosen from the following list.

Options

FINS2622 Emerging Capital Markets
FINS2643 Wealth Management
FINS3623 Venture Capital
FINS3625 Applied Corporate Finance
FINS3626 International Corporate Governance
FINS3630 Bank Financial Management
FINS3631 Risk and Insurance
FINS3633 Real Estate Finance
FINS3634 Credit Analysis and Lending
FINS3635 Options, Futures and Risk Management
FINS3636 Interest Rate Risk Management
FINS3637 Wealth Management Advice
FINS3640 Investment Management Modelling
FINS3641 Security Analysis and Valuation
FINS3642 Strategies for Investment Management
FINS3650 International Banking
FINS3651 International Financial Services
FINS3775 Research Methods in Finance

Finance Honours

This program is available to the end of Year 3 only for BEc students and to the end of fourth year for BCom students only.

Required

Prior to Year 4

FINS1612 Capital Markets and Institutions
FINS1613 Business Finance
FINS2624 Portfolio Management
FINS3616 International Business Finance
FINS3775 Research Methods in Finance

Year 4

Session One

Three compulsory courses:

FINS4774 Financial Decision Making Under Uncertainty
FINS4776 Advanced Topics in Asset Pricing
FINS4779 Research Methods in Finance 2

Plus one elective from:

FINS4777	Advanced Topics in Corporate Finance
FINS4781	Special Topics in Finance

Session Two

FINS4795	Thesis (Finance)

Finance (Honours) Co-op Program

This program is available only to students admitted through the scholarship selection procedures administered by the Co-op Program Office. Entry to the program is at first year only.

This is a four-year Honours degree program combining the requirements of the BCom with 15 months of coordinated industrial experience.* Industrial training extends outside university sessions.

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A
ECON1101	Microeconomics 1
ECON1202	Quantitative Methods A
FINS1612	Capital Markets and Institutions

Session Two

ACCT1511	Accounting and Financial Management 1B
ECON1102	Macroeconomics 1
ECON1203	Quantitative Methods B
FINS1613	Business Finance

Year 2

Summer Session

FINS2100	Industrial Training 1 (12 weeks)

Session One

FINS2624	Portfolio Management
FINS Option	Option

Session Two

FINS3616	International Business Finance
FINS Option	Option
General Education	

Year 3

Session One

FINS3100	Industrial Training 2 (24 weeks)
FINS3775	Research Methods in Finance 1
Option	

Session Two

FINS3200	Industrial Training 3 (24 weeks)
General Education	
FINS Option	

Year 4

Session One

FINS4774	Financial Decision Making Under Uncertainty
FINS4776	Advanced Topics in Asset Pricing
FINS4779	Research Methods in Finance 2
Finance Honours Elective Course	

Session Two

FINS4795	Thesis

With the approval of the Head of School, students who fail to meet the performance requirements for Honours may substitute an approved selection of Finance courses for level 4 courses and will be awarded a Pass degree [see Rule 9 (9.4)].

Rules Governing the Award of the Degree of Bachelor of Commerce (Finance Co-op)

Rule 1 - Pass and Honours Degrees

1.1 The degree of Bachelor of Commerce in Finance Co-op is a four-year degree program for which Honours will normally be granted. There shall be three classes of Honours, namely Class 1, Class 2 in two Divisions and Class 3.

1.2 With the approval of the Head of School, students who fail to meet the performance requirements for Honours may substitute approved Banking and Finance and other courses for Level 4 courses and be awarded a Co-op Pass degree.

Rule 2 - Disciplinary Minors

It is not possible for students to complete the requirements of two majors in the Bachelor of Commerce (Hons) Finance Co-op degree and they must therefore choose options so that they complete equivalent to a 'disciplinary minor' in a discipline other than their finance major. A "disciplinary minor" is defined as four approved session courses, or equivalent value for courses taught outside the Faculty, of which no more than 12 units of credit may be first year courses.

Rule 3 - Entry and Continuation Conditions

3.1 Entry to the program is conditional upon:

- meeting the entry requirements for the Bachelor of Commerce degree
- the selection process for Finance Co-op Scholarships

3.2 Except in exceptional circumstances, continuation in the program is conditional on meeting the performance standards required to maintain the Co-op Scholarship. Students who lose their scholarship and are therefore excluded from continuing in the program will be transferred to a Bachelor of Commerce degree program and the relevant requirements.

3.3 Students must achieve a minimum average mark of 70% in Banking and Finance courses to remain in the program.

Rule 4 - Assessable Hours

4.1 On Campus Courses: Normal workload expectations for courses run in "on campus" mode are a minimum of 25 hours per session per unit of credit, including class contact hours, preparation and time spent on all assessable work.

4.2 Industrial Training: Normal workload expectations for industrial training courses are a minimum of the normal working hours per week for the site at which the student is based during the duration of the course, and program requirements as determined for placement.

Rule 5 - Passing in a Course

Where, in the following rules, reference is made to the requirement that a student shall pass a course, the requirement shall be construed as meaning that the student shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of the School concerned.

Rule 6 - Normal Program

The program leading to the award of the degree of Bachelor of Commerce (Hons) Finance Co-op comprises 192 units of credit to be completed over a period of four academic years. Except in exceptional circumstances, a student must enrol in a minimum of 12 units per session and will not be permitted to enrol in more than 24 units.

Except in exceptional circumstances, students are required to undertake the Industrial Training Courses at the following times during the degree program:

- Industrial Training 1 in the summer between first and second year
- Industrial Training 2 in the first half of their third year
- Industrial Training 3 in the second half of their third year

Rule 7 - Minimum Time for Completion

The minimum time for completing the requirements for the degree of Bachelor of Commerce (Hons) Finance Co-op is eight sessions full-time and Industrial Training.

Rule 8 - Academic Program Requirements: BCom 3502

To complete the requirements for the award of the degree of Bachelor of Commerce (Hons) Finance Co-op a student must complete and pass 192 units of credit which shall include:

- The compulsory courses set out in the program requirements.
- 12 units of approved General Education courses offered by faculties other than the Faculty of Commerce and Economics.
- A major of at least 48 units in Finance (which must be passed at an average distinction level) in Level 1-3 courses, in addition to Industrial Training units, and a minor in another approved disciplinary stream.
- A student cannot:
 - count more than 60 units of Level 1 core and elective courses towards their degree unless in exceptional circumstances;
 - attempt General Education courses until they have attempted 48 units of mainstream courses;
 - count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of General Education requirements;

8.4.4 count a mainstream course offered by faculties other than the Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

Rule 9 - Honours Degree

9.1 Honours may be taken in Banking and Finance only.

9.1.1 Students who achieve the performance standard for the Co-op Finance Honours Degree program at the conclusion of Stage 3, must complete the Level 4 requirements in Stage 4, or transfer to the standard BCom pass degree.

9.2 Honours degrees will not be awarded if academic performance is below the prescribed level.

9.3 Except in exceptional circumstances and with the approval of the Head of School to continue in the Honours program students must:

9.3.1 achieve a minimum average mark of 75% in Banking and Finance courses taken in years 1, 2 and 3 of the program, and

9.3.2 pass all components of the program at the first attempt.

9.4 Students who fail to meet the performance requirements for Honours:

9.4.1 may substitute approved Banking and Finance or other courses within the Faculty of Commerce and Economics (students wishing to undertake a major in accounting must have the approval of the Head of School of Accounting) for Level 4 courses and be awarded a Co-op Pass degree, and

9.4.2 shall not be permitted to enrol in Financial Decision Making Under Uncertainty, Advanced Topics in Asset Pricing, Research Methods in Finance 2, Advanced Topics in Corporate Finance, Recent Developments in Banking Research, Special Topics in Finance and Thesis (Finance).

Human Resource Management

The minimum requirements for a major in Human Resource Management are the required courses, two courses from List A, and one course from List B and one course from either List A or List B.

To meet the requirements for a minor, students must complete the three required courses and one option.

Required

MGMT1701	Industrial Relations
MGMT1712	Management of Organisations
MGMT2718	Human Resource Management

Options

List A

MGMT3702	International Human Resource Management Practice
MGMT3724	Strategic Human Resource Management
MGMT3728	Managing Pay and Performance
MGMT3729	Managing Workplace Training

List B

MGMT1702	Labour Organisation
MGMT2702	Industrial Law*
MGMT2703	International Employment Relations*
MGMT2704	Social Organisation of Work
MGMT2715	Labour History*
MGMT2724	Health and Safety at Work
MGMT3705	Management and Employment Relations
MGMT3706	Industrial Relations Policies and Processes*
MGMT3721	Negotiation, Bargaining and Advocacy

* Please consult School timetable for availability.

Human Resource Management Honours (BCom students only)

The minimum requirements for a major at Honours level in Human Resource Management are the required courses listed below, one course from List A above, one course from List B above, plus the Year 4 required courses listed below.

Required

MGMT1701	Industrial Relations
MGMT1712	Management of Organisations
MGMT2718	Human Resource Management
MGMT3708	Philosophy and Research Methods in Employment and Management*

*MGMT3708 is a prerequisite for Year 4 Honours and should normally be taken in the session preceding the Honours year.

Year 4

Required

MGMT4731	Case Studies A
MGMT4732	Case Studies B
MGMT4733	Honours Seminar
MGMT4738	Thesis (Human Resource Management)

Industrial Relations

The minimum requirements for a major in Industrial Relations are the required courses, two courses from List A, and one course from List B and one course from either List A or List B.

To meet minor requirements students must complete the three required courses and one option.

Required

MGMT1701	Industrial Relations
MGMT1702	Labour Organisation*
MGMT2702	Industrial Law

Options

List A

MGMT2704	Social Organisation of Work
MGMT2715	Labour History*
MGMT3705	Management and Employment Relations
MGMT3706	Industrial Relations Policies and Processes*

List B

MGMT1712	Management of Organisations
MGMT2703	International Employment Relations*
MGMT2718	Human Resource Management
MGMT2724	Health and Safety at Work
MGMT3702	International Human Resource Management Practice
MGMT3708	Research Methods in Employment and Management
MGMT3721	Negotiation, Bargaining and Advocacy
MGMT3724	Strategic Human Resource Management
MGMT3728	Managing Pay & Performance
MGMT3729	Managing Workplace Training

* Please consult School timetable for availability.

Industrial Relations Honours

This program is available to the end of Year 3 only for BEc students and to the end of Year 4 for BCom students only.

The minimum requirements for a major at Honours level in Industrial Relations are the required courses listed below, one course from List A above, one course from List B above, plus the year 4 required courses listed below.

Required

MGMT1701	Industrial Relations
MGMT1702	Labour Organisation*
MGMT2702	Industrial Law
MGMT3708	Philosophy and Research Methods in Employment and Management*

*MGMT3708 is a prerequisite for Year 4 Honours and should normally be taken in the session preceding the Honours year.

Year 4

Required

MGMT4731	Case Studies A
MGMT4732	Case Studies B
MGMT4733	Honours Seminar
MGMT4734	Thesis (Industrial Relations)

* Please consult School timetable for availability.

Information Systems

Required

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks

Options

INFS2609	Software Implementation
INFS2611	Requirements Elicitation
INFS3603	Business Intelligence Systems
INFS3604	Information Technology Management
INFS3605	Implementation Workshop
INFS3606	Telecommunications for Electronic Commerce
INFS3608	Advanced Database Systems

INFS3611	Design Workshop
INFS3622	Distributed Application Design and Implementation*
INFS3623	Multimedia Systems Design*
INFS3685	Electronic Commerce Management

Year 4**Required**

INFS4795	Thesis Part A (Information Systems)
INFS4796	Thesis Part B (Information Systems)
INFS4886	Research Topics in 1 Information Systems
INFS4887	Research Topics in 2 Information Systems

Options

Two options must be chosen from:

INFS4774	Information Systems Security
INFS4805	Information Systems Auditing
INFS4810	Advanced Data Management
INFS4811	Knowledge Management Systems and Technology
INFS4848	Information Systems Project Management
INFS4853	Information Systems Management
INFS4891	Decision Support Systems
INFS4893	Special Topic in Information Systems and Management

Information Systems and Management Co-op Program

This program is available only to students admitted through the scholarship selection procedures administered by the Co-op Program Office. Entry to the program is at first year only.

This is a four-year Honours degree program combining the requirements of the BCom with 18 months of coordinated industrial experience.* Industrial training extends outside university sessions.

Required

INFS1602	Computer Information Systems
INFS1603	Business Data Management
INFS2603	Systems Analysis and Design
INFS2607	Business Data Networks
INFS3604	Information Technology Management
INFS4886	Research Topics in Information Systems 1
INFS4887	Research Topics in Information Systems 2
INFS4795	Thesis A
INFS4796	Thesis B
INFS2791	Industrial Training A
INFS3792	Industrial Training B
INFS4793	Industrial Training C

Options

INFS2609	Software Implementation
INFS2611	Requirements Elicitation
INFS3603	Business Intelligence Systems
INFS3605	Implementation Workshop
INFS3606	Telecommunications for Electronic Commerce
INFS3608	Advanced Database Systems
INFS3611	Design Workshop
INFS3685	Electronic Commerce Management

Honours Options

Two options must be chosen from:

INFS4774	Information Systems Security
INFS4805	Information Systems Auditing
INFS4810	Advanced Data Management
INFS4811	Knowledge Management Systems and Technology
INFS4848	Information Systems Project Management
INFS4853	Information Systems Management
INFS4891	Decision Support Systems
INFS4893	Special Topic in Information Systems and Management

* With the approval of the Head of School, students who fail to meet the performance requirements for Honours may substitute an approved selection of Information Systems courses for level 4 courses and will be awarded a Pass degree.

Rules Governing the Award of the Degree of Bachelor of Commerce (Information Systems and Management Co-op)**Rule 1 – Pass and Honours Degrees**

1.1 The degree of Bachelor of Commerce in Information Systems and Management is an Honours degree program. There shall be three classes of Honours, namely Class 1, Class 2 in two Divisions and Class 3.

1.2 With the approval of the Head of School students who fail to meet the performance requirements for Honours may substitute approved Information Systems courses for level 4 courses and be awarded a Pass degree (see also Rule 9.4)

Rule 2 – Disciplinary Minors

As this is a single major, students must choose options so that they complete a 'disciplinary minor' in a discipline other than Information Systems. A 'disciplinary minor' is defined as four approved session courses to the value of 24 units of credit, or equivalent value for courses taught outside the faculty, of which no more than 12 units may be first year courses.

Rule 3 – Entry and Continuation Conditions

3.1 Entry to the program is conditional upon:

- meeting the entry requirements for the Bachelor of Commerce
- the selection process for Co-op Scholarships

3.2 Except in exceptional circumstances, continuation in the program is conditional upon meeting the performance standards required to maintain the Co-op Scholarship.

Students who lose their scholarship and are therefore excluded from continuing in the program will be transferred to a Bachelor of Commerce generalist degree program.

Rule 4 – Assessable Hours

4.1 On Campus Courses: Normal workload expectations for courses run in "on campus" mode are a minimum of 25 hours per session per unit of credit, including class contact hours, preparation and time spent on all assessable work.

4.2 Industrial Training: Normal workload expectations for industrial training courses are a minimum of the normal working hours per week for the site at which the student is based for the duration of the course

Rule 5 – Passing in a Course

Where, in the following rules, reference is made to the requirement that a student shall pass a course, the requirement shall be construed as meaning that the student shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of School concerned.

Program Structure: Information Systems and Management Co-op Program

Rule 6 – Normal Program

This program leading to the award of the degree of Bachelor of Commerce in Information Systems and Management comprises 192 units of credit to be completed over a period of four academic years.

Except in exceptional circumstances, a student must enrol in a minimum of 12 units per session, and will not be permitted to enrol for more than 24 units.

Except in exceptional circumstances, students are required to undertake the Industrial Training Courses (having met all prerequisites) at the following times:

- Industrial Training A in the first half of their second year
- Industrial Training B in the second half of their third year
- Industrial Training C in the first half of their fourth year

Rule 7 – Minimum Time for Completion

The minimum time for completing the requirements for the degree is normally eight sessions full-time.

Rule 8 – Academic Program Requirements

To complete the requirements for the award of the degree a student must complete and pass 192 units of credit which shall include:

8.1 The compulsory courses set out in the program requirements.

8.2 12 units of approved General Education courses offered by faculties other than the Faculty of Commerce and Economics.

8.3 A major of at least 48 units in Information Systems in Level 1–3 courses, in addition to Industrial Training units, and a minor in another approved disciplinary stream

8.4 A student cannot:

8.4.1 count more than 60 units of Level 1 core and electives courses towards their degree unless in exceptional circumstances;

8.4.2 attempt General Education courses until they have attempted 48 units of mainstream courses;

8.4.3 count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of General Education requirements;

8.4.4 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

Rule 9 – Honours

9.1 Honours may be taken in Information Systems and Management only.

9.2 Honours degree will not be awarded if academic performance is below the prescribed level.

9.3 Except in exceptional circumstances and with the approval of the Head of School to continue in the Honours program students must:

9.3.1 achieve a minimum average of 70% in Information Systems courses taken in years 2 and 3 of the program, and

9.3.2 pass all components in the program at the first attempt.

9.4 Students who fail to meet the performance requirements for Honours:

9.4.1 may substitute approved Information Systems courses for level 4 courses and be awarded a Pass degree and,

9.4.2 shall not be permitted to enrol in Thesis A, Thesis B, Research Topics in Information Systems 2 and further Honours options.

International Business

This program is available as a single major and co-major in the BCom (Pass) and as a co-major in the BEc (Pass) degrees. To satisfy minimum requirements for an International Business minor, students must take MGMT1101 & MGMT1102 plus 2 MGMT Options (excluding language options).

Required

MGMT1101	Global Business Environment
MGMT1102	Managing Across Cultures
MGMT2101	International Business and Multinational Operations
MGMT3101	International Business Strategy
MGMT3102	Asia-Pacific Business

Options

At least one option must be chosen from List A

List A

MGMT2106	Comparative Management Systems in East Asia
MGMT2110	Alliance Management and International Co-operation*
MGMT3103	Global Stakeholder Management*

* Please consult the School of Organisation and Management course timetable for availability.

List B

MGMT1001	Communicating in Business
MGMT2105	Chinese Business Enterprise
ECON2105	Economics of Corporations
ECON2111	Globalisation
ECON2322	European Integration
FINS1612	Capital Markets and Institutions
FINS2622	Emerging Capital Markets
LEGT1732	Franchising
LEGT2791	International Business Law
MGMT2703	International Employment Relations
JAPN1000	Japanese Communication 1A#

Note:

1. Other modern languages may be taken as List B options: please see Modern Languages stream.

2. Students may count relevant courses offered in the Faculty of Arts and Sciences as List B options with the approval of the Head of School.

#For students with no Japanese. Students with HSC or equivalent competence will be enrolled at a suitable level course, subject to the results of a placement test.

International Business Honours**Session One**

MGMT4101	Applied Research Methods in International Business
MGMT4102	Advances in International Business Theory
MGMT4103	Research Seminar in International Business
MGMT4501	Research Thesis Part A

Session Two

MGMT4502	Research Thesis Part B (18 UOC)
MGMT4104	Contemporary Res. Topic in International Business

Management

To meet minor requirements students must complete MGMT1001, MGMT1002, one course from List A and one from List B

Required

MGMT1001	Fundamentals of Management
MGMT1002	Managing Organisational Behaviour
MGMT2001	Managing Innovation and Organisational Change
MGMT2002	Managing Business Communication
MGMT3001	Managing Business Strategy*

* Please consult the School of Organisation and Management course timetable for availability.

Options

At least one option must be chosen from List A.

List A

ACCT2522	Management Accounting: Process Improvement & Innovation
ACCT3583	Stakeholder Value Management
ECON2112	Game Theory & Business Strategy
MGMT1102	Managing Across Cultures
MGMT2703	International Employment Relations
MGMT2718	Human Resource Management
MARK1012	Marketing Fundamentals

List B

ACCT3585	E-Business: Strategy and Processes
ECON2105	Economics of Corporations
ECON3121	Managerial Economics
FINS1612	Capital Markets and Institutions
FINS1613	Business Finance
INFS1602	Computer Information Systems
LEGT1711	Legal Environment of Commerce
LEGT2712	Business, Ethics & the Law

Management Honours

MGMT3708 is a prerequisite for all Year 4 Honours students and should be completed in Session 2, preceding the commencement of an Honours year.

The minimum requirements for Year 4 Management Honours are completion of a major or co-major in Management, required coursework and a 20,000 word thesis.

Marketing**Required**

MARK1012	Marketing Fundamentals
MARK2051	Consumer Behaviour
MARK2052	Marketing Research
MARK2053	Marketing Communications & Promotions Management
MARK2054	Market Analysis
MARK3081	Distribution Strategy and Retail Channels
MARK3082	Strategic Marketing Management

Options

MARK1014	Customer Relationship Management
MARK2055	Services Marketing Management
MARK3071	International & Global Marketing
MARK3072	Advanced Consumer Behaviour
MARK3091	New Product & New Service Development
MARK3092	Brand Management

Marketing Honours

This program is available to the end of Year 4 for BCom students only.

Year 4**Required**

MARK7204	Thesis (Marketing) Part A
MARK7210	Business Research Methods in Marketing
MARK7211	Research Seminar in Marketing
MARK7212	Advanced Quantitative Methods in Marketing
MARK7213	Contemporary Research Methods in Marketing
MARK7205	Thesis (Marketing) Part B

Marketing Co-op Program

Entry to the program is at first year only and through the scholarship selection procedures administered by the Co-op Program Office.

This is a four-year degree program.

Year 1**Session One**

ACCT1501	Accounting and Financial Management 1A (core)
ECON1101	Microeconomics (core)
ECON1202	Quantitative Methods A (core)
MARK1012	Marketing Fundamentals (core)

Session Two

ACCT1511	Accounting and Financial Management 1B (core)
ECON1102	Macroeconomics (core)
ECON1203	Quantitative Methods B (core)
Elective 1	

Year 2**Session One**

MARK2999	Industrial Training 1 (core)
MARK2051	Consumer Behaviour (core)
MARK2052	Market Research (core)

Session Two

MARK2053	Marketing Communications & Promotions Management (core)
MARK2054	Market Analysis (core)
Elective 2	
6 UOC of General Education	

Year 3**Session One**

MARK3081	Distribution Strategy & Retail Channels (core)
Elective 3	
Elective 4	
Elective 5	

Session Two

MARK3999	Industrial Training 2 (core)
Elective 6	

Year 4**Session One**

MARK4999	Industrial Training 3 (core)
6 UOC of General Education	

Session Two

MARK3082	Strategic Marketing Management (core)
Elective 7	
Elective 8	
Elective 9	

Rules Governing the Award of the Degree of Bachelor of Commerce (Marketing Co-op)**Rule 1 – Pass Degree**

The degree of Bachelor of Commerce (Marketing Co-op) may be conferred as a Pass degree. In cases of superior academic performance throughout the course, the Pass degree will be conferred with Distinction.

Rule 2 – Disciplinary Minors

Students not completing the requirements of a double major in the program must choose options so that they complete a 'disciplinary minor' in a discipline other than Marketing. A 'disciplinary minor' is defined as four approved session courses to the value of 24 units of credit, or equivalent for courses taught outside the faculty, of which no more than 10 units may be first year courses.

Rule 3 – Entry and Continuation Conditions

3.1 Entry to the program is conditional upon:

- meeting the entry requirements for the Bachelor of Commerce
- the selection process for Co-op Scholarships

3.2 Except in exceptional circumstances, continuation in the program is conditional upon meeting the performance standards required to maintain the Co-op Scholarship. Students who lose their scholarship and are therefore excluded from continuing in the program will be transferred to a Bachelor of Commerce generalist degree program.

Rule 4 – Assessable Hours

4.1 On Campus Courses: Normal workload expectations for courses run in "on campus" mode are a minimum of 25 hours per-session per unit

of credit, including class contact hours, preparation and time spent on all assessable work.

4.2 Industrial training: Normal workload expectations for industrial training courses are a minimum of the normal working hours per week for the site at which the student is based for the duration of the course.

Rule 5 – Passing in a Course

Where, in the following rules, reference is made to the requirement that a student shall pass a course, the requirement shall be construed as meaning that the student shall complete assignments, laboratory work, other set work and an examination or examinations by the prescribed dates to the satisfaction of the Head of School concerned.

Program Structure: Marketing Co-op Program**Rule 6 – Normal Program**

This program leading to the award of the degree of Bachelor of Commerce (Marketing Co-op) comprises 192 units of credit to be completed over a period of four academic years.

Except in exceptional circumstances, a student must enrol in a minimum of 12 units per session, and will not be permitted to enrol in more than 24 units per session.

Except in exceptional circumstances, students are required to undertake the Industrial Training Courses (having met all prerequisites) at the following times:

- Industrial Training 1 at the commencement of the first half of their second year
- Industrial Training 2 in the second half of their third year
- Industrial Training 3 in the first half of their fourth year

Rule 7 – Minimum Time for Completion

The minimum time for completing the requirements for the degree is normally eight sessions full-time.

Rule 8 – Academic Program Requirements

To complete the requirements for the award of the degree a student must complete and pass 192 units of credit which shall include:

8.1 The compulsory courses set out in the program requirements.

8.2 12 units of approved General Education courses offered by faculties other than the Faculty of Commerce and Economics

8.3 Either:

8.3.1 a major of at least 48 units in Marketing, in addition to Industrial Training units, and a minor in another approved disciplinary stream; or

8.3.2 a major of at least 42 units in Marketing, in addition to Industrial training units and a second major of 42 units in another approved disciplinary stream.

8.4 A student cannot:

8.4.1 count more than 60 units of Level 1 core and electives courses towards their degree unless in exceptional circumstances;

8.4.2 attempt General Education courses until they have attempted 48 units of mainstream courses;

8.4.3 count mainstream courses offered by other faculties as substitutes for General Education courses towards more than 6 units of General Education requirements;

8.4.4 count a mainstream course offered by faculties other than Faculty of Commerce and Economics both as a substitute for a Commerce and Economics option and as a substitute for a General Education elective.

Rule 9 – Honours

9.1 For the Honours degree, a student must complete a further 48 units in Marketing.

9.2 Honours may be taken in Marketing only.

9.3 The additional units, comprising specified courses from the Marketing Honours program and a thesis, must be completed in two sessions following the completion of the Pass degree component.

9.4 The Honours degree will not be awarded if academic performance is below the prescribed level.

9.5 Except in exceptional circumstances, and with the approval of the Head of School to continue in the Honours program, students must:

(a) satisfy the Pass degree requirements and achieve a minimum average of 70% in Marketing courses taken in level 2 and level 3 courses of the program, and

(b) pass all components in the program at the first attempt.

9.6 Except with the special permission of the program authority on the recommendation of the Head of School, a person on whom the Pass degree of Bachelor of Commerce or equivalent has been conferred shall not be admitted to candidature for the Honours degree.

Modern Languages

Language programs available: Chinese, French, German, Greek (Modern), Indonesian, Italian, Japanese, Korean, Russian, Spanish.

Programs in Modern Languages are not available as a single major, but as a co-major only. However, language programs are not available as a co-major with Asian Studies, Business Law & Taxation, Japanese Studies, Korean Studies, another language or language studies.

To obtain a major, students must complete 42 units of credit in one language program offered by the Faculty of Arts and Social Sciences.

Modern Languages is not available as a minor.

Services Marketing - Tourism and Hospitality (BCom students only)

This program is available only as a co-major integrated program with Marketing and only to those students admitted to the Bachelor of Commerce in Services Marketing – Tourism and Hospitality degree (program code 3571).

Program Structure

Year 1

Session One

ECON1101	Microeconomics 1	(6 UOC)
ACCT1501	Accounting & Financial Management 1A	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
SERV1100	Tourism and Hospitality Operational Studies	(6 UOC)

Session Two

SERV1001	Foundamentals of Tourism	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)

Year 2

Session One

SERV2001	Destination Marketing	(6UOC)
ACCT1511	Accounting & Financial Management 1B	(6UOC)
MARK2051	Consumer Behaviour	(6UOC)
MARK2055	Services Marketing and Management	(6UOC)

Session Two

SERV2002	Services Operations Management	(6 UOC)
MARK2053	Marketing, Communications, & Promotions Management	(6 UOC)
SERV2003	Service Industry Project	(6 UOC)
Option		(6 UOC)

Year 3

Session One

MARK2052	Marketing Research	(6 UOC)
LEGT3001	Legal Aspects of Tourism	
or		
ECON2117	Economics of Tourism	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Session Two

MARK2054	Market Analysis	(6 UOC)
SERV3001	Managing People for Service advantage	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Year 4

Session One

SERV4001	Strategic Management in Tourism and Hospitality	(6 UOC)

SERV4002	Entrepreneurship in Services	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Session Two

SERV4003	Tourism Policy and Planning	(6 UOC)
MARK3082	Strategic Marketing Management	(6 UOC)
Option		(6 UOC)
Option		(6 UOC)

Electives

SERV2004	Event Management	(6 UOC)*
SERV2005	Managing Customer Service Experience	(6 UOC)*

**Please consult School timetable for availability.*

Taxation

This program is not available as a single major, or as a double major. This program is not available with the major or a minor in Business Law.

Required Courses

LEGT1711	Legal Environment of Commerce
LEGT2721	Business Transactions
LEGT2751	Business Taxation
LEGT3752	Capital Gains Tax
LEGT3755	Taxation of Business Entities

Two options to be chosen from List A

List A

Two courses from the following list:

LEGT2756	International Business Taxation
LEGT3753	GST & FBT
LEGT3757	Corporate Tax Strategy
LEGT3758	Taxation of Financial Products

One further option to be chosen from either List A or List B

List B

LEGT2741	Business Entities
ACCT2542	Corporate Financial Reporting and Analysis
ACTL3005	Superannuation and Retirement Benefits
ECON3106	Public Finance

Note: Other courses offered by the School of Business Law and Taxation may be substituted for the optional courses listed above with approval of the Head of School.

Taxation Honours

Honours level work may be undertaken as part of the four-year Honours program. The Honours program provides additional training in the discipline and in research methods relevant to the discipline.

Students intending to undertake fourth year Honours are advised to enroll in one of the Honours options shown below in the third year.

Fourth year Honours is open to all high achieving internal and external students. Students are required to enrol in LEGT4726 Research Methods in Taxation in session one and LEGT4900 Taxation Honours Thesis in both Session One and Session Two.

Year 4

Required

LEGT4722	Special Topic in Taxation
LEGT4725	Contemporary Issues in Taxation
LEGT4726	Research Methods in Taxation
LEGT4900	Taxation Honours Thesis

Options

One option to be chosen from the following courses

LEGT3753	GST & FBT
LEGT2756	International Business Taxation
LEGT3757	Corporate Tax Strategy
LEGT3758	Taxation of Financial Products

Faculty of Engineering

A Message from the Dean

This Handbook describes the many undergraduate programs available in the Faculty of Engineering at UNSW. There is a very wide choice of programs, plans and electives and we therefore suggest you spend some time reading the Handbook carefully.

Whatever program you consider, it will be managed by one of our ten schools. Each school will have an advisor who can help you plan your program.

In addition to the individual programs you can broaden your University experience by taking one of the wide range of combined programs which combine the BE with BSc, BA, LLB and BCom degrees. A Master of Biomedical Engineering may be studied concurrently with several of the BE programs.

The Faculty of Engineering is dedicated to scholarship and research and to the facilitation of student learning. The academic staff are engaged in research and engineering practice, most of which is in collaboration with industry. This engagement with the frontiers of engineering and the related sciences ensures that students are familiar with the latest developments. In later years many students are able to participate in the work of the research teams in the Faculty.

The Faculty is a major part of the international dimension of UNSW, we welcome many international students and also encourage local students to take part of their program at an overseas university. We have strong links with major research universities throughout the world.

Students are encouraged to play an active role in all the University has to offer. There are many student led projects and other activities which can enhance your experience as a student at UNSW.

Brendon Parker
Dean
Faculty of Engineering

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Combined/Concurrent Degree Programs

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Fast-Track Programs with Master of Engineering Science

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Fast-Track Programs with Master of Engineering Science

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Combined/Concurrent Degree Programs

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3715	Electrical Engineering/Bachelor of Commerce	233
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3646	Telecommunications/ Bachelor of Arts	236
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3634	Photonic Engineering/Bachelor of Science	237
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	Mechanical Engineering/Bachelor of Arts	243
	Mechatronic Engineering/Bachelor of Arts	243
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Bachelor of Engineering/Master of Biomedical Engineering

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School of Mining Engineering

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School of Petroleum Engineering

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Graduate School of Biomedical Engineering

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3138	Bachelor of Engineering (Materials Science)/ Master of Biomedical Engineering	261
3683	Bachelor of Engineering (Mechanical Engineering)/ Master of Biomedical Engineering	261
3688	Bachelor of Engineering (Mechatronic Engineering)/ Master of Biomedical Engineering	261
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Faculty Information and Assistance

The entry for the Faculty of Engineering is divided into separate sections for each school/unit. Before reading 'Rules for Progression and the Award of Degrees', you must read the general information at the front of this Faculty entry and then read the opening sections for each of the schools within the Faculty. These sections cover all degrees and diplomas offered by the Faculty. Detailed information on each course then appears under **Course Descriptions** at the end of this Handbook, which includes pre/corequisite details, class hours, units of credit, etc.

You will find that almost any program of study you wish to undertake has courses from other schools, and even other faculties. This means that in your engineering program, courses are listed from other schools in the Faculty of Engineering, each with its own identifying code, as well as from the school in which you are planning to study. If, for example, this is Mechanical and Manufacturing Engineering (MECH), all the courses for Mechanical and Manufacturing Engineering are described in the section for that school. As Mechanical and Manufacturing Engineering also includes Aerospace Engineering (AERO), Manufacturing Engineering and Management (MANF), Mechatronic Engineering (MTRN) and Naval Architecture (NAVL), these courses are also included with the school.

For a full list of courses offered by the University refer to the Online Handbook at www.handbook.unsw.edu.au or visit the Faculty website and refer to the relevant school.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

Who Can Help?

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of Engineering.

If you require advice about enrolment, degree requirements, progression within programs, course content and requirements, contact the appropriate school representative listed below:

Faculty of Engineering, Dean's Office

Ms Donna Bailey, Room 605, Building K17
Tel: (02) 9385 6437

School of Chemical Engineering and Industrial Chemistry

Ms Vanessa Werfel, Room 314, Applied Science Building
Tel: (02) 9385 4777

School of Civil and Environmental Engineering

Ms Karenne Irvine, Room 406, Civil Engineering Building
Tel: (02) 9385 5061

School of Computer Science and Engineering

Student Office, Ground Floor, K17 Building
Tel: (02) 9385 4329 or (02) 9385 4926

School of Electrical Engineering and Telecommunications

Ms Gladys Fong, School Office, Electrical Engineering Building
Tel: (02) 9385 4000

School of Mechanical and Manufacturing Engineering

Associate Professor Philip Mathew, Room 107, Mechanical and Manufacturing Engineering Building
Tel: (02) 9385 4154

School of Mining Engineering

Dr Paul Hagan, Room 158, Old Main Building
Tel: (02) 9385 4514

School of Petroleum Engineering

Ms Jennifer Lippiatt, Room LG11, Petroleum Engineering Building
Tel: (02) 9385 4144

School of Photovoltaic & Renewable Energy Engineering

Ms Trichelle Burns, Room LG11, Electrical Engineering Building
Tel: (02) 9385 6155

School of Surveying and Spatial Information Systems

Mr Leon Daras, School Office, Room 426, Electrical Engineering Building
Tel: (02) 9385 4182

Graduate School of Biomedical Engineering

School Office, 5th Floor, Samuels Building
Tel: (02) 9385 3917

Important: As changes may be made to information provided in this Handbook, students should frequently consult the official noticeboards of the schools, the University and the Online Handbook at www.handbook.unsw.edu.au

The Faculty of Engineering Website

www.eng.unsw.edu.au

This Faculty of Engineering website provides information about programs, courses, research interests, news and current events. The website also contains links to all the schools, units, centres and affiliated research institutes of the Faculty, as well as staff and student information resources.

Entrance Requirements

Students with a UAI (or equivalent) greater than 85 will be considered for admission based on performance in their Australian Year 12 studies and/or tertiary or post-secondary qualifications and/or overseas qualifications equivalent to Australian studies. Students eligible to apply to UNSW via UAC and with ranks in the range 75-84.99 apply for entry through Multiple Criteria Entry (MCE). Other international applicants apply directly to UNSW.

For further details about Multiple Criteria Entry, please refer to the website www.eng.unsw.edu.au/multiplecriteria/2005

General Education Requirements

Students must satisfy the General Education requirements. This is usually 12 UOC taken in the second and third years of their studies. If a student is in a combined degree program with a reduced General Education requirement and then reverts to the single degree program, the usual General Education requirements for that program apply.

Each Faculty has responsibility for deciding what courses can be counted towards the General Education requirement for their students. The Faculty of Engineering is committed to providing the widest range of choice of General Education electives for its students. It strongly encourages students to make the best use of this flexibility. Please contact your School Office for further information on General Education electives available to you.

For a more detailed explanation of the requirements and objectives of General Education and a guide to the choice of specific courses, students should refer to the General Education section in this Handbook or the Online Handbook at www.handbook.unsw.edu.au.

Re-enrolment Procedures

All current students are able to re-enrol via the web using myUNSW. This means that, in most cases, students will be able to enrol and drop classes without the need to fill in forms or attend their program office.

Further information, including details on how and when to enrol for 2006 using myUNSW, is available via myUNSW (<https://my.unsw.edu.au>)

It is the responsibility of students to enrol in a program consistent with the rules governing re-enrolment and admission to the degree.

Faculty Centres

ARC Centre of Excellence in Advanced Silicon Photovoltaics and Photonics

Director: Scientia Professor Stuart Wenham

In 2003, the ARC Centre of Excellence in Advanced Silicon Photovoltaics and Photonics was established by the Australian Research Council. This new Centre of Excellence was established to coordinate previously independent world-leading programs conducted under the Key Centre for Photovoltaic Engineering, the PV Special Research Centre, and the Special Research Centre for Third Generation Photovoltaics including all collaborating organisations. This re-organisation aims at increasing the coordination, cross-fertilisation and concentration of effort of the previously separate Centres, as well as launching new initiatives in the commercial application of recent contributions to silicon photonics.

The proposed program of research for the Centre falls into the following strands:

- Silicon wafer-based ('first generation') photovoltaic approaches, applying the group's leadership in both laboratory and commercial technologies to the key issues facing photovoltaics over the coming decade.
- Silicon thin-film ('second generation') approaches.
- 'Third generation' photovoltaic approaches, capable of performance higher than single junctions, continuing the highly assessed program being conducted within the SRC for Third Generation Photovoltaics.
- Silicon photonics, including the development of high-efficiency silicon-based light emitters and high speed modulators for microelectronics.

The first three strands address issues relevant to the PV industry over the next 20 years, while the fourth applies insights and technology developed in our PV work to the broader microelectronics area.

Professional Institutions

1. Institution of Engineers Australia

The professional body for engineering in Australia is Institution of Engineers Australia, which has as its first objective the promotion of the science and practice of engineering in all its branches.

Institution of Engineers Australia has its national headquarters in Canberra and functions through a series of divisions, the local one being the Sydney Division. Within each division are branches representing the main interests within the profession, e.g. civil, mechanical, electrical, engineering management and environmental engineering.

Students of an approved school of engineering may join the Institution as a student member. Student members receive the monthly publications *Engineers Australia* and *Student News* and have access to other publications at preferential rates.

Student members are invited to participate in the Excellence Award for Work Experience, the National Young Engineer of the Year Award and to avail themselves of other Engineers Australia services including the Mentor Scheme and industrial experience guidance.

For more information and membership application forms, contact Institution of Engineers Australia, Sydney Division, 1st Floor, 118 Alfred Street, Milsons Point 2061, telephone (02) 8923 7100, website www.ieaust.org.au

2. The Institution of Surveyors, Australia and the Spatial Sciences Institute, Australia

During their undergraduate years, students in the Surveying and Spatial Information Systems program are encouraged to take the first steps in joining in the activities of the professional bodies which represent them: the Institution of Surveyors and the Spatial Sciences Institute. The aims of the bodies are to promote scientific, technical and educational aspects of Surveying and Spatial Information Systems and to maintain high professional standards of practice and conduct. Student members receive the journals of the Institutes and *Azimuth*, which is published by the NSW Division of the Institution. Membership also entitles the student to attend all meetings of the Institution and to attend the annual SSI Congress at a special concessional rate. Membership application forms are available at the office of the School of Surveying and Spatial Information Systems and from the Institution Office, Third Floor, Guild House, 363 Pitt Street, Sydney 2000. Websites www.isaust.org.au and www.spatialsciences.org.au

3. The Association of Professional Engineers, Scientists and Managers, Australia

APESMA is a professional organisation that represents the industrial interests of its members with a major focus on providing advice and assistance on employment related matters, including individual representation and improving salaries and conditions for professional engineers, scientists and managers.

Students are invited to become affiliate members (free of charge) of the Association while they are studying. This membership gives students access to information and advice on industrial experience, salary rates for graduates and contracts of employment. Student members receive *The Student Update*, a publication designed specifically for students, three times a year. This gives students some practical insight into aspects of the workplace to which they may not have given much thought, in particular the employment issues that affect them as professional engineers. More information and student membership application forms can be obtained from APESMA, Level 1, 491 Kent Street, Sydney 2000, telephone: 9263 6500, website www.apesma.asn.au

Summary of Programs

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

Full-time Programs

The Faculty of Engineering offers the following full-time undergraduate programs:

Bachelor of Engineering BE

in:	
Aerospace Engineering	3710
Bioinformatics	3647
Chemical Engineering	3040
Civil Engineering	3620
Computer Engineering	3645
Electrical Engineering	3640
Environmental Engineering	3625
Industrial Chemistry	3100
Manufacturing Engineering and Management	3710
Mechanical Engineering	3710
Mechatronic Engineering	3710
Mining Engineering	3140
Naval Architecture	3710
Petroleum Engineering	3045
Photonics Engineering	3644
Photovoltaics & Solar Energy	3642
Renewable Energy Engineering	3657
Software Engineering	3648
Surveying and Spatial Information Systems	3741
Telecommunications	3643

Bachelor of Science BSc

Computer Science	3978
Food Science and Technology	3060
Food Science and Technology (Honours)	3065

Bachelor of Science (Technology) BSc(Tech)

Chemical Engineering	3050
Food Science and Technology	3070
Industrial Chemistry	3110

Combined Degree Programs

Full-time programs are available for the award of the following degrees:

Bachelor of Engineering Bachelor of Science BE BSc

(5 years duration) in:

Aerospace Engineering	3711
Bioinformatics	3755
Chemical Engineering	3042
Civil Engineering	3730
Computer Engineering	3726
Electrical Engineering	3725
Environmental Engineering	3735
Industrial Chemistry	3102
Manufacturing Engineering and Management	3711
Mechanical Engineering	3711
Mechatronic Engineering	3711
Mining Engineering	3142
Naval Architecture	3711
Petroleum Engineering	3047
Photonic Engineering	3634
Photovoltaics and Solar Energy	3655

Renewable Energy Engineering	3658
Software Engineering	3651
Surveying and Spatial Information Systems	3746
Telecommunications	3641

Bachelor of Engineering Bachelor of Arts BE BA

(5 years duration) in:

Aerospace Engineering	3712
Bioinformatics	3756
Chemical Engineering	3043
Civil Engineering	3621
Computer Engineering	3722
Electrical Engineering	3720
Environmental Engineering	3626
Industrial Chemistry	3103
Manufacturing Engineering and Management	3712
Mechanical Engineering	3712
Mechatronic Engineering	3712
Mining Engineering	3144
Naval Architecture	3712
Photovoltaics and Solar Energy	3656
Software Engineering	3652
Surveying and Spatial Information Systems	3747
Telecommunications	3646

Bachelor of Engineering Bachelor of Commerce BE BCom

(5 years duration) in:

Software Engineering	3653

(5.5 years duration) in:

Bioinformatics Engineering	3715
Chemical Engineering	3715
Civil Engineering	3715
Computer Engineering	3715
Electrical Engineering	3715
Environmental Engineering	3715
Industrial Chemistry	3715
Manufacturing Engineering and Management	3715
Mechanical Engineering	3715
Mechatronic Engineering	3715
Mining Engineering	3715
Petroleum Engineering	3715
Photonics Engineering	3715
Photovoltaics & Solar Energy	3715
Renewable Energy Engineering	3715
Surveying and Spatial Information Systems	3715
Telecommunications	3715

Bachelor of Engineering Bachelor of Laws BE LLB

(6 years duration) in:

Civil Engineering	4775
Environmental Engineering	4777

Bachelor of Engineering Bachelor of Engineering BE BE

(5 years duration) in:

Civil Engineering and Mining Engineering	3146
Civil Engineering and Environmental Engineering	3631

Bachelor of Science Bachelor of Science BSc BSc

(4 years duration) in:

Computer Science	3983

Bachelor of Science Bachelor of Arts BSc BA

(4 years duration) in:

Computer Science	3968

Bachelor of Science Bachelor of Digital Media BSc BDM

(4 years duration) in:

Computer Science and Digital Media	3982

Bachelor of Engineering Master of Engineering (BE ME) or Master of Science (BE MSc)

Admission Guidelines: An applicant for the BE ME or BE MSc program should, at the time of application, be enrolled in the 4.5-year fast-track Faculty of Engineering BE MEngSc program and have just completed the requirements for the BE component at a minimum of Honours Class 2 or equivalent. Applications to transfer to the ME or MSc degree should be made to the Registrar.

Period of Candidature for ME MSc Degree: The normal period is three academic sessions (full-time). In special cases, this can be reduced by up to two academic sessions. The maximum period of registration is six academic sessions (full-time). It is expected that such candidates complete the entire BE ME or BE MSc program in 5 years (which includes a Summer Session in their 5th year), and that they would be enrolled on a full-time basis.

Coursework: Candidates who have completed the BE component of the BE MEngSc program (and who have hence successfully completed 12 units of credit of postgraduate coursework in their 4th year of study) are considered to have fully satisfied the Faculty of Engineering requirement for ME or MSc coursework.

Award of ME MSc Degree: As for the standard research ME or MSc program. That is, the award of the ME or MSc degree is on the basis of a thesis which embodies the result of an investigation, or design, or engineering development.

Fast-Track Programs**Bachelor of Engineering Master of Engineering Science BE MEngSc**

Students may undertake a 4.5-year (10 semesters) full-time fast-track program leading to the awards of a Bachelor of Engineering and a Master of Engineering Science in an approved discipline (see below) of the Faculty of Engineering.

In the School of Computer Science and Engineering this program is the Bachelor of Engineering and Master of Information Technology.

The purpose of the program is to offer an accelerated completion of a postgraduate coursework program in engineering to high achieving students. The program will be fully accredited and will provide students with in-depth specialist training to facilitate employment in discipline specific consulting practices and other specialist areas of the profession. The fast-track program structure will thus encourage completion of a first postgraduate coursework program, and lay the groundwork for lifelong learning.

(4 1/2 years duration) in:

Bioinformatics	3647
Chemical Engineering	3040
Civil Engineering	3620
Computer Engineering	3645
Electrical Engineering	3640
Environmental Engineering	3625
Industrial Chemistry	3100
Manufacturing Engineering & Management	3710
Mechanical Engineering	3710
Mechatronic Engineering	3710
Mining Engineering	3140
Software Engineering	3648
Surveying and Spatial Information Systems	3741
Telecommunications	3643

Fast-Track Programs Bachelor of Engineering Master of Commerce

These programs are no longer offered to commencing students. Students who enrolled prior to 2004 only are eligible to do these programs. Please contact your School Office if you require further information.

Concurrent Degree Programs

Full-time programs are available for the award of the following degrees:

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Students may undertake a five-year full-time program leading to the awards of a Bachelor of Engineering (in an approved discipline) and a Master of Biomedical Engineering.

The purpose of a program is to offer accelerated completion of a postgraduate coursework program to high-achieving students. Students are required to maintain a Credit average in the first three years in order to continue enrolment in the postgraduate component of the program.

(5 years duration) in:

Bioinformatics	3757
Chemical Engineering	3048
Computer Engineering	3728
Electrical Engineering	3727
Materials Science	3138
Mechanical Engineering	3683
Mechatronic Engineering	3688
Software Engineering	3749
Telecommunications	3723

UNSW Co-op Program

The UNSW Co-op Program is a scholarship program set up by industry and the University of New South Wales, which provides money and industry training for selected undergraduate students in disciplines in Commerce, Science and Engineering.

The UNSW Co-op Program offer scholarships for five-year programs in: Chemical Engineering, Industrial Chemistry, Computer Science, Electrical Engineering, Telecommunications, Material Science and Engineering, Mechanical and Manufacturing Engineering, Mining Engineering, Petroleum Engineering, Photovoltaics and Solar Energy, and Surveying and Spatial Information Systems.

Applicants should have achieved a particular academic standard (UAI 95.7 or equivalent), however, if you are expecting a UAI of at least 93.8, it would still be worth applying. Students are selected as Co-op Scholars largely on the basis of their personal skills, leadership potential and motivation, as well as their non-academic achievements.

Applications close the end of September each year with interviews held at UNSW at the beginning of December. For more details see your School Careers Adviser or contact the UNSW Co-op Program office on (02) 9385 5116 or visit www.co-op.unsw.edu.au

Transfer Programs

Students transferring to UNSW after successful completion of part of an engineering degree program at an Australian university would normally be admitted with advanced standing into the degree programs offered by the Faculty of Engineering.

Students who have completed part of an undergraduate program in one school may apply through UAC for a transfer to a program in another school of the Faculty with credit for relevant courses completed. However, as there are significant differences in the various programs, students are not necessarily granted exemption from the same number of courses as they have completed in the program to which the transfer is made.

Enrolment quotas apply to undergraduate programs and the number of places available for transfer is limited and offers will be made on a competitive basis.

Formal advanced standing procedures apply for entry into the following Bachelor of Engineering (BE) programs at the UNSW with full credit.

BE in Aerospace Engineering

The Faculty has approved an arrangement whereby students who satisfy the requirements of the first two years of a Mechanical Engineering four-year degree program at any Australasian tertiary institution may be admitted to Years 3 and 4 of the program leading to the Bachelor of Engineering degree in Aerospace Engineering. The proviso is that Head of the School is satisfied that the courses studied at the other institution are equivalent, and he gives his recommendation.

BE in Naval Architecture

The Faculty has approved an arrangement whereby students who satisfy the requirements of the first two years of a Mechanical Engineering four-year degree program at any Australasian tertiary institution may be admitted to Years 3 and 4 of the program leading to the Bachelor of Engineering degree in Naval Architecture. The proviso is that Head of the School is satisfied that the courses studied at the other institution are equivalent, and he gives his recommendation.

Rules for Progression and the Award of Degrees

Access to Exam Information

Students in the Faculty of Engineering may request access to their own final examination scripts and may request consultation with the examiner on their performance provided that a written application is made to the program authority no later than fifteen working days after the date of official release of results.

Bachelor of Engineering Program Rules

1. The Bachelor of Engineering is awarded following the completion of a minimum of 192 units of credit.
2. The specific requirements for the Bachelor of Engineering in the various disciplines are set out in the relevant sections in this Handbook.
3. The degree may be awarded with Honours, based upon the overall performance in the program and in accordance with Faculty and School policies. Honours are awarded in the following classes – Class 1, Class 2 Division 1, Class 2 Division 2.

4. The standard duration of the program is four years, or eight sessions, of full-time study each comprising 24 units of credit. Students may undertake the program over a longer period on the basis of part-time study.

5. Each student is required to complete a minimum of 60 days of approved experience in industry prior to graduation.

6. General Education electives may only be attempted after the student has attempted at least 24 units of credit.

Bachelor of Engineering Bachelor of Science Program Rules

To qualify for the Bachelor of Engineering and the Bachelor of Science a student must complete successfully courses that total at least 240 units of credit and include:

(a) in the Faculty of Engineering:

- courses making up a full 4-year engineering program described in the degree requirements for the BE specialisation for which the student is enrolled; and

(b) in the Faculty of Science:

- at least 102 units of credit comprising a major in an approved disciplinary stream described in Table A of the Science Handbook, or a major in Computer Science; and

(c) at least 60 days of approved Industrial Training (required for the award of the BE degree).

Exclusions

The following combined degree combinations are specifically excluded:

BE in Computer Engineering BSc in Computer Science

BE in Software Engineering BSc in Computer Science

Requirements for the BE and BSc degrees with Honours

(a) BE with Honours

On completion of the requirements for the combined degrees a student may qualify for the award of the BE degree with Honours in accordance with the rules for the BE program of specialisation and the Faculty of Engineering rules for calculation of the grade of Honours (1st Class Honours: a weighted average of 75% or greater; 2nd Class Honours Division i: a weighted average of 70% or greater; 2nd Class Honours Division ii: a weighted average of 65% or greater, a student being awarded the highest grade of Honours for which they qualify).

(b) BSc with Honours

On completion of the requirements for the combined degrees a student may be qualified to enrol in an Honours program in the Bachelor of Science and to qualify for the award of the BSc with Honours after successfully completing an additional year of study (48 UOC) as specified in the rules of the Faculty of Science.

Programs of study

The programs of study which may be taken for the degrees of Bachelor of Engineering and Bachelor of Science are governed by the normal rules for award of the BE and BSc in the Faculty of Engineering and the Faculty of Science respectively, which specify:

- (i) units of credit;
- (ii) corequisites, prerequisites, assumed knowledge;
- (iii) the structure of the degree program; and
- (iv) any special conditions.

Award of the degrees

(i) A candidate for the award of the degrees of Bachelor of Engineering or Bachelor of Science as part of a combined degree program shall not be eligible to be awarded either degree until he or she has completed both degree requirements.

(ii) A student who completes the requirements for both the BE and BSc degrees shall receive at graduation a separate testamur for each of the degrees.

(iii) A student may apply to discontinue the combined BE BSc programs and elect to complete either the BE or BSc degree in accordance with the rules governing award of that degree. Following discontinuation of one of the programs (BE or BSc), courses which count toward that program may not in general count toward the remaining single degree unless they meet the single degree requirements in their own right.

Administration of the programs

(i) A student's general program will be administered by the Faculty of Engineering and delegated to administration by the school governing the Engineering specialisation.

(ii) Students' programs will be administered by the Faculty of Science for the BSc component of the program and by the Faculty of Engineering for the BE part of the program.

(iii) The Faculty of Science and the Faculty of Engineering shall jointly exercise authority in any matter concerning the combined programs not otherwise covered by these rules.

Enrolment

(i) An application to enrol as a candidate for the combined program shall be made through the UAC, or on the prescribed form for international students which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(ii) The candidate shall be enrolled as either a full-time or part-time student.

General Education

Students are enrolled in combined undergraduate programs, leading to the award of two degrees, each in a different faculty, and therefore meet their General Education requirements.

Program structure

Contained in the University Handbook are typical program structures for each of the schools within the Faculty of Engineering, and for the Faculty of Science. The programs may be varied by students according to the rules governing electives, prerequisites and corequisites and progression within each program. Subject to pre and corequisites and progression rules, students may take courses at any time during the program; it is the responsibility of each student to ensure that the rules governing award of the degrees have been met and that the program of study in each session of enrolment is feasible with regards to progression and timetabling.

Admission Requirements

(i) **Local HSC students:** Local students apply through the UAC. Students admitted to the combined program will have to meet the requirement for entry to the combined program, which ensures that the requirements for entry to both the BSc and the relevant BE program are met (i.e. the higher of the two requirements has to be met).

(ii) **International students:** International students will be assigned an equivalent rank to enable their performance to be compared to that of local HSC students, using criteria determined by the Admissions Office. Students have to apply to the Admissions Office using the application forms (paper or electronic) provided for the purpose. International students completing Year 12 in Australia apply directly to the UAC. An admission requirement similar to that for local students will have to be met.

(iii) **Admission to later stages of the program:** Students may be admitted to the combined degree program having satisfied part of the requirements for either the BSc or the BE component of the degree (or part of the requirements for both), either at UNSW or at another institution. Students will be admitted on the basis of an equivalent rank, determined by the Admissions Office, equivalent to that required for local HSC students in the year of entry. Students will be offered advanced standing in accordance with normal practice for the BE and BSc degrees. Students will apply using the procedures appropriate for either local HSC students or international students (above).

Bachelor of Engineering Master of Engineering Science Program Rules

1. The minimum duration of the program is 4.5 years (including a summer semester at the end of the 4th year) leading to the award of the two degrees Bachelor of Engineering (BE) and Master of Engineering Science (MEngSc). In the School of Computer Science and Engineering, the award is Bachelor of Engineering (BE) and Master of Information Technology (MIT).

2. Students must study all courses in the sequence approved by the Faculty of Engineering and are not permitted to enrol in any graduate course until the first six semesters of the program are successfully completed.

3. A minimum average of 65% in the first 3 years of the BE program is required for consideration for entry to the fast track degree program.

4. Honours grading for the BE degree will be based on performance in the first 4 years of study, with course weightings in accordance with School guidelines. The 12 units of credit of graduate coursework undertaken in Year 4 are thus counted for both degrees.

5. Normal Student Contributions/fees apply to the first 8 semesters of the program (including the 12 units of credit of MEngSc courses completed in Year 4) consistent with other undergraduate programs within the Faculty. Fees for the remaining 36 units of credit of the MEngSc program will be 75% of the current fee for the standard 48 units of credit MEngSc.

Faculty Rules for Progression

Progression in all undergraduate programs in the Faculty of Engineering is permitted by course. However:

1. Programs will continue to be stated and timetabled by year or stage and it cannot be guaranteed that non-standard programs can be completed in the minimum number of years. Students are not permitted to enrol in courses with clashing timetables.

2. Students must satisfy the relevant prerequisite and corequisite requirements. This will usually necessitate students completing or attempting all courses of a particular year or stage before proceeding to a course in the next part of a program. Further details are available from schools.

A **prerequisite** course is one which must be completed prior to enrolment in the course for which it is prescribed.

A **corequisite** course is one which must either be completed successfully before or be studied concurrently with the course for which it is prescribed.

3. Only in exceptional circumstances will students be allowed to enrol in a program containing courses from more than two consecutive years of the program or totalling more than 27 units of credit. Students repeating courses will be expected to choose a program that includes previously failed courses and limits their units of credit. Details of these limits are available from School offices and may only be exceeded with the express permission of the Head of School. A failed elective may be replaced by another elective.

4. Notwithstanding the above, before students can enrol in any non-standard programs, such program must meet with the approval of the Head of School. A non-standard program is one which involves enrolment in courses from more than one year or stage, or comprises courses which are not normally included in the program for a particular year.

For Academic Standing rules please refer to the General University Rules and Student Information section in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

Program Revision

Following any program revision, students whose progression is normal are entitled to complete under the version of the program that applied when they first enrolled. Alternatively, they may transfer to the revised program with credit for all courses completed at the time the revised program is introduced.

Program Rules and Information

Faculty of Engineering – All Schools

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3715 Bachelor of Engineering Bachelor of Commerce

BE BCom

Typical Duration

5.5 years

Minimum UOC for Award

264 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Faculty of Engineering and the Faculty of Commerce and Economics offer a combined degree program which qualifies students for two degrees after five and a half years of successful study: the Bachelor of Engineering (potentially with Honours) and the Bachelor of Commerce (for which an Honours program requires an additional 48 UOC).

This combined degree is offered in the following Engineering disciplines:

Bioinformatics Engineering
Chemical Engineering
Civil Engineering
Computer Engineering
Electrical Engineering
Environmental Engineering
Industrial Chemistry
Manufacturing Engineering and Management
Mechanical Engineering
Mechatronic Engineering
Mining Engineering
Petroleum Engineering
Photonics Engineering
Photovoltaics & Solar Energy
Renewable Energy Engineering
Software Engineering (program code 3653)
Surveying and Spatial Information Systems
Telecommunications

Requirements for the Bachelor of Engineering and the Bachelor of Commerce degrees

To qualify for the Bachelor of Engineering and the Bachelor of Commerce a student must complete successfully courses that total at least 264 units of credit and include:

- (a) in the Faculty of Engineering:
 - courses making up at least 168 units of credit described in the degree requirements for the BE specialisation for which the student is enrolled; and
- (b) in the Faculty of Commerce:
 - at least 96 units of credit comprising a major of at least 48 units of credit in an approved disciplinary stream and a minor of 24 units of credit of approved session courses of which no more than 12 units may be level 1 courses; prescribed level 1 introductory courses; or suitable electives to make up the full 96 UOC; and
- (c) at least 60 days of approved Industrial Training (required for the award of the BE degree).

Administration of the Programs

- (i) A student's general program will be administered by the Faculty of Engineering and delegated to administration by the school governing the engineering specialisation.
- (ii) Students' programs will be administered by the Faculty of Commerce and Economics for the BCom component of the program and by the Faculty of Engineering for the BE part of the program.
- (iii) The Faculty of Commerce and Economics and the Faculty of Engineering shall jointly exercise authority in any matter concerning the combined programs not otherwise covered by these rules.

Enrolment

- (i) An application to enrol as a candidate for the combined program shall be made through UAC to the following programs:

BE in Software Engineering BCom 425028(HECS), 445028 (FEE)

BE in all other programs BCom 425029(HECS), 445029(FEE),

or on the prescribed form for international students which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

- (ii) The candidate shall be enrolled as either a full-time or part-time student.

Program Objectives and Learning Outcomes

The program is intended for potential engineers who wish to become more aware of economic and social aspects of the engineering profession, and skilled in technical management. It is expected that those taking this program would progress to entrepreneurial and managerial roles. A full range of commerce and engineering careers will still be open to those who qualify with both components of the combined degree program.

Most engineers progress to technical management roles, and these programs will strengthen the commerce background in addition to providing the engineering skills. Increasingly, engineers also find employment in the commercial sector, and the combined programs will provide a good background for those entering banking, consultancy etc. Students wishing to enter the purely commercial sector will benefit from technical and numerate strengths obtained as part of the engineering program.

Program Structure

Stage 1

Session One

Science & Engineering courses (24 UOC)

Session Two

Science & Engineering courses (24 UOC)

Stage 2

Session One

Science & Engineering courses (24 UOC)

Session Two

Commerce courses (24 UOC)

Stage 3

Session One

Commerce courses (24 UOC)

Session Two

Science & Engineering courses (24 UOC)

Stage 4

Session One

Science & Engineering courses (12 UOC)
Commerce courses (12 UOC)

Session Two

Science & Engineering courses (12 UOC)
Commerce courses (12 UOC)

Stage 5

Session One

Science & Engineering courses (24 UOC)

Session Two

Science & Engineering courses (24 UOC)

Stage 6

Commerce courses 24 units of credit

Honours

(a) BE with Honours

On completion of the requirements for the combined degrees a student may qualify for the award of the BE degree with Honours in accordance with the rules for the BE program of specialisation and the Faculty of Engineering rules for calculation of the grade of Honours (1st Class Honours: a weighted average of 75% or greater; 2nd Class Honours Division i: a weighted average of 70% or greater; 2nd Class Honours Division ii: a weighted average of 65% or greater, a student being awarded the highest grade of Honours for which they qualify).

(b) BCom with Honours

On completion of the requirements for the combined degrees a student may be qualified to enrol in an Honours program in the Bachelor of Commerce and to qualify for the award of the BCom with Honours after successfully completing an additional year of study (48 UOC) as specified in the rules of the Faculty of Commerce.

Academic Rules

The programs of study which may be taken for the degrees of Bachelor of Engineering and Bachelor of Commerce are governed by the normal

rules for award of the BE and BCom in the Faculty of Engineering and the Faculty of Commerce respectively, which specify:

- (i) units of credit;
- (ii) corequisites, prerequisites, assumed knowledge;
- (iii) the structure of the degree program; and
- (iv) any special conditions.

Award of the Degrees

(i) A student who completes the requirements for both the BE and BCom degrees shall receive at graduation a separate testamur for each of the degrees.

(ii) A student may apply to discontinue the combined BE BCom programs and elect to complete either the BE or BCom degree in accordance with the rules governing award of that degree. Following discontinuation of one of the programs (BE or BCom), courses which count toward that program will not in general count toward the remaining single degree unless they meet the single degree requirements in their own right.

School of Chemical Engineering and Industrial Chemistry

Head of School: Associate Professor Michael Brungs

Administrative Officer: Vivienne Brennan

Director, Teaching and Learning: Associate Professor Vicki Chen

The School offers a Bachelor of Engineering in both Chemical Engineering and Industrial Chemistry, together with a Bachelor of Science in Food Science and Technology. The duration of these degree programs is four years full-time. Six year part-time programs in Chemical Engineering and Industrial Chemistry are also available, leading to a Bachelor of Science (Technology). The School also offers a Bachelor of Science (Honours) in Food Science and Technology and a 3 year Bachelor of Science (Food Science and Nutrition major) program.

The Bachelor of Engineering degrees are accredited by the Institution of Engineers Australia and the Royal Chemical Institute. The Bachelor of Engineering in Chemical Engineering is also accredited by the Institution of Chemical Engineers (UK). Graduates of both Food Science and Technology programs qualify for membership of the Australian Institute of Food Science and Technology, the US Institute of Food Technologists and may qualify for membership of the Royal Australian Chemical Institute.

Combined degree programs are also available for suitably qualified students. These are the Bachelor of Engineering Bachelor of Science and the Bachelor of Engineering Bachelor of Arts. Also available are Bachelor of Engineering Bachelor of Commerce. A concurrent Bachelor of Engineering Master of Biomedical Engineering is also available in Chemical Engineering. The School offers a fast-track program over 4.5 years full-time, the Bachelor of Engineering and Master of Engineering Science (BE MEngSc), which allows flexibility of choice between formal coursework and project work and also a 5 year BE ME or MSc (Chem Eng).

Chemical Engineering is the application of the principles of the physical sciences, together with the principles of economics and human relations, to fields in which matter undergoes a change in state, energy content or composition. The chemical engineer is generally responsible for the design, construction and operation of plant and equipment used in the chemical processing industries. Chemical Engineers are employed in a very wide range of industries including the chemical, minerals, pharmaceutical, food and energy industries. Many chemical engineers work in environmental management, research and development business, management and computer applications.

Industrial chemists have a strong foundation in the basic sciences, particularly chemistry, in addition to their engineering skills. Their roles range from solving problems in forefront research areas, to the successful operation of Australia's manufacturing industry. Industrial chemists characterise and select raw materials, develop environmentally responsible routes for the production of commodity materials and chemicals, control chemical plan and processes and verify the quality of the product. Industrial chemists are capable of fulfilling a multiplicity of roles as research scientists, development chemists, technical representatives and as plant/company managers.

Food Science and Technology involves an understanding of the basic sciences and the application of this knowledge to food manufacture from the point of production, through handling, processing, preservation, distribution and marketing, up to consumption and utilisation by consumers. It is concerned with food processes, commodities, composition and quality (including sensory properties, safety and nutritional value).

The study of Food Science and Technology integrates many scientific disciplines. Its bases are in chemistry, physics, biochemistry, microbiology, and molecular biology. The challenges are to increase the availability, variety, quality and quantity of foods economically and in line with the needs of the world population. The Australian industry has a major role to play in supplying high quality foods to overseas markets and there is a national and international demand for professionally trained people prepared to accept responsibility for the production, quality and safety of this food. The programs provide basic preparation for food science and technology careers in the food industry, the public sector, education, research, the food service industry, public health, management and marketing. Graduates may also find careers in health and environmental sciences, management of food resources, and communication and in areas such as dietetics after further training.

For the award of Honours, students need to have distinguished themselves in the formal work, in other assignments as directed by the Head of the School, and in the final year project, for which a thesis is required. It is compulsory that, before completion of the program, students in both the Chemical Engineering and Industrial Chemistry full-time programs must obtain a minimum of twelve weeks professionally oriented or industrial experience. Students in the part-time programs in Chemical Engineering and Industrial Chemistry must complete an approved program of industrial experience of not less than twelve months prior to the award of the degree.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3040 Chemical Engineering (Full-time)

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program extends over four years and students study full-time during the day for twenty-eight weeks of each year (excluding examination and recess periods).

The Director of Teaching and Learning may approve various program patterns involving full-time or part-time study.

This program is also available as a combined degree program with BE (Chem Eng) BSc (program 3042), BE (Chem Eng) BA, (program 3043), BE(Chem Eng) BCom, program 3715, the concurrent degree BE (Chem Eng) MBiomedE, (program 3048), and the fast track program BE(Chem Eng) MEngSc, (program 3040, plan CEICL3040). For more information, please contact Director, Teaching and Learning.

Program Structure

Year 1

CEIC1010	Introduction to the Chemical Industry	(3 UOC)
CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CEIC1030	Communication & Business Skills	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)

And ONE of the following courses:

PHYS1111	Fundamentals of Physics*	(6 UOC)
PHYS1169	Physics 1 (Chem,Mech,Min Eng)	(6 UOC)

* If PHYS1111 is taken, then PHYS1229 MUST be taken in S2

Year 2

CEIC2011	Instrumental Analysis - Theory	(3 UOC)
CEIC2012	Instrumental Analysis - Practical	(3 UOC)
CEIC2020	Introduction to Numerical Methods	(3 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)

CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CHEN2050	Chemical Engineering Laboratory 1	(3 UOC)
CHEN2061	Introduction to Process Chemistry 1	(6 UOC)
CHEN2062	Introduction to Process Chemistry 2	(3 UOC)
CHEN2140	Mass Transfer	(3 UOC)
ELEC0809	Electrical Engineering 1C	(3 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)
General Education		(3 UOC)

Year 3

BIOT3100	Fundamentals of Biotechnology	(3 UOC)
CEIC3010	Reaction Engineering	(4 UOC)
CEIC3070	Process Control	(4 UOC)
CEIC3110	Thermodynamics	(3 UOC)
CHEN3021	Systems Modelling & Analysis	(3 UOC)
CHEN3022	Process Modelling & Optimisation	(3 UOC)
CHEN3031	Advanced Transport Phenomena	(3 UOC)
CHEN3062	Particles, Separation, Heat Exchangers and Pressure Vessels	(6 UOC)
CHEN3065	Plant and Equipment Design	(4 UOC)
CHEN3067	Process Design & Economics	(3 UOC)
CHEN3068	Process Design & Safety	(3 UOC)
CHEN3080	Chemical Engineering Practice 2	(3 UOC)
General Education		(6 UOC)

Year 4

CEIC4070	Laboratory Automation Science	(4 UOC)
CEIC4101	Professional Electives Advanced	(3 UOC)
CEIC4102	Professional Electives Extended	(3 UOC)
CEIC4106	Professional Electives	(3 UOC)
CEIC4120	Management & Plant Operation	(6 UOC)
CHEN4031	Environmental Management 1	(3 UOC)
CHEN4081	Design Project	(8 UOC)
CHEN4091	Research Project Theory	(3 UOC)
CHEN4092	Research Project Practice	(12 UOC)
General Education		(3 UOC)

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

For the award of Honours in the Chemical Engineering and Industrial Chemistry programs, students need to have distinguished themselves in the formal work, in other assignments as directed by the Head of the School, and in the final year project, for which a thesis is required.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

It is compulsory that, before completion of the program, students in both the Chemical Engineering and Industrial Chemistry full-time programs must obtain a minimum of twelve weeks professionally oriented or industrial experience. Students in the part-time programs in Chemical Engineering and Industrial Chemistry must complete an approved program of industrial experience of not less than twelve months prior to the award of the degree.

Further Requirements

Students are expected to possess a calculator having exponential capabilities, however, more advanced calculators and personal computers, will be found useful. In examinations, students may be required to use calculators supplied by the University, so that no student will have an unfair advantage over another. Further information may be obtained from the Head of School.

Students of both Chemical Engineering and Industrial Chemistry are advised to have a copy of Perry J H Ed. Chemical Engineers Handbook 6th Ed. McGraw-Hill. This book is used extensively for most courses and units. Certain courses and units do not have specified textbooks and in these cases reference books are used or printed notes supplied.

If you are required to complete a varied program of physics or maths in your first year (i.e. General Maths or Fundamentals of Physics), then

students are not permitted to undertake studies in higher options of other courses.

Professional Recognition

Successful completion of the BE degree program is accepted by the Institution of Chemical Engineers, the Institution of Engineers, Australia, and Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

3050 Chemical Engineering (Part-time)**Bachelor of Science (Technology) BSc(Tech)****Typical Duration**

6 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

Six year part-time program leading to the award of the degree of Bachelor of Science (Technology) in Chemical Engineering is intended for students who are employed in relevant industries and who wish to prepare for a degree mainly by part-time attendance. They consist of the first 3 years of the respective full-time program, but undertaken over a six year period.

As part of the requirements for the award of the BSc(Tech) degree, students are required to complete an approved program of industrial training of not less than one year prior to the award of the degree. Industrial training should normally be completed concurrently with attendance in the program, but with the approval of the Head of School, may be completed after completion of the prescribed program of study.

Students who qualify for the award of the BSc(Tech) degree and who wish to proceed to the award of a BSc or BE degree will normally be required to complete further work which will involve at least one year of full-time attendance.

Holders of the degree of BSc(Tech) or BSc(Eng) will be eligible to proceed to the award of the degree of Master of Science or Master of Engineering, please refer to course regulations relating to these degrees.

Transfer is also possible from full-time programs to the part-time BSc (Tech) degree program, but a period of approved industrial experience must be gained before graduation. This requirement will apply to students transferring from BSc and BE degree programs within the Faculty.

Further details of part time programs can be obtained from the Director of Teaching and Learning.

Program Structure

The structure of this part-time program is similar to the full-time program (BE Chemical Engineering 3040) only over a longer period. Please refer to the 3040 Chemical Engineering program entry for more information.

Academic Rules

For academic rules relating to this program, please refer to the entry for the full-time program (BE Chemical Engineering 3040) and contact the Faculty of Engineering for more information.

Note that as part of the requirements for the award of the BSc(Tech) degree, students are required to complete an approved program of industrial training of not less than one year prior to the award of the degree or with the approval of the Head of School, may be completed after completion of the prescribed program of study.

3060 Food Science and Technology (Full-time)**Bachelor of Science BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program is designed to provide depth and breadth in the relevant physical and biological sciences on which food science and technology is based. It is strongly recommended that students obtain, before the completion of the program and during recess periods, as much

professionally oriented or industrial experience as possible. The BSc program in Food Science and Technology (3060) is Pass or Honours, determined by academic performance in Stages 2-4.

Program Structure

Year 1

BIOS1201	Molecules, Cells and Genes	(6 UOC)
FOOD1120	Introduction to Food Science	(6 UOC)
FOOD1130	The Food industry	(6 UOC)
MATH1031	Mathematics for Life Sciences	(6 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)
PHYS1111	Fundamentals of Physics	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

Year 2

CHEM2921	Food Chemistry 1	(6 UOC)
FOOD1230	Food Choice	(6 UOC)
FOOD3220	Nutrition	(6 UOC)
MICR2201	Fundamentals of Microbiology and Immunology	(6 UOC)
BIOC2181	Fundamentals of Biochemistry	(6 UOC)
BIOC2291	Fundamentals of Molecular Biology	(6 UOC)
General Education courses		(12 UOC)

Year 3

CHEM3811	Food Chemistry 2	(6 UOC)
FOOD1360	Food Processing Principles	(6 UOC)
FOOD1370	Food Preservation: Principles and Applications	(6 UOC)
FOOD1380	Unit Operations in Food Processing	(6 UOC)
FOOD1390	Product Design and Development	(6 UOC)
FOOD2320	Food Microbiology	(6 UOC)
FOOD2330	Quality Assurance and Control	(6 UOC)
FOOD2340	Food Safety	(6 UOC)

Year 4

Stream A

FOOD5400	Industry Liaison*	(6 UOC)

And ONE of the following courses:

FOOD1400	Project	(6 UOC)
FOOD1480	Minor Project	(6 UOC)

Plus a combination of electives to total 30 or 36 units of credit from the following list.

BIOT3011	Biotechnology A	(6 UOC)
BIOT3021	Biotechnology B	(6 UOC)
BIOT3071	Commercial Biotechnology	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
FOOD1470	Postharvest Technology of Food	(6 UOC)
FOOD1490	Advanced Food Chemistry	(6 UOC)
FOOD2350	Forensic Food Science	(6 UOC)
FOOD2480	Advanced Food Microbiology	(6 UOC)
FOOD2490	Analytical Microbiology	(6 UOC)
FOOD3440	Advanced Nutrition	(6 UOC)
FOOD4450	Advanced Food Processing	(6 UOC)
INFS1603	Business Data Management	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)

Or such other electives as approved by the Head of School. FOOD courses taken within the School must total at least 36 units of credit.

Please note FOOD1470 and FOOD2490 will not be offered in 2006.

Stream B: Industry Module Program

FOOD5400	Industry Liaison*	(6 UOC)
FOOD5410	Industry Practicum	(24 UOC)
Plus Electives		(18 UOC)

*During Stage 4 of the program, excursions are made to various food industries. Detailed reports of some of these visits may be required.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Chemical Engineering and Industrial Chemistry for more information.

Further Information

During the program, excursions are made to various food industries. Detailed reports of some of these visits may be required.

Professional Recognition

Graduates of this program qualify for membership of the Australian Institute of Food Science and Technology, the US Institute of Food Technologists, and may qualify for membership of the Royal Australian Chemical Institute.

The program provides basic preparation for food science and technology careers in the food industry, the public sector, education, research, the food service industry, public health, management and marketing. Graduates may also find careers in health and environmental sciences, management of food resources and food wastes, and communication, and in areas such as dietetics after further training.

3065 Honours in Food Science

Bachelor of Science (Honours) BSc(Hons)

Typical Duration

1 year

Minimum UOC for Award

48 units of credit

Typical UOC per Session

24 units of credit

Program Description

This is a one-year full-time Honours program in Food Science. It is designed to provide extensive research training in some aspects of Food Science and Technology at undergraduate level. The research orientation of the program, compared to the Graduate Diploma, facilitates entry into a research higher degree (MSc/PhD) upon completion of Honours at a satisfactory level.

Entry to the program requires satisfactory completion of a Bachelor degree, or equivalent, in an area considered relevant to Food Science and Technology. Students who have completed a four year Bachelor program, in which Honours has already been awarded, are specifically excluded.

The major component of the program is an extensive research project, conducted throughout one year of full-time study. Candidates also take 6 units of credit of courses within the School, or such other courses as approved by the program coordinator. Honours is awarded on the basis of performance in the research project and satisfactory completion of coursework.

Program Structure

Compulsory Courses

FOOD9410	Honours Research Project
(21 UOC)	
FOODXXXX*	

*Courses offered in Food Science and Technology or as approved by the program coordinator and dependent upon the background of the candidate. Units of credit for coursework courses may be concentrated in one session.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Chemical Engineering and Industrial Chemistry for more information.

3070 Food Science and Technology (Part-time)

Bachelor of Science (Technology) BSc(Tech)

Typical Duration

6 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program is designed for students who are employed in the food processing industries. It extends over six part-time years of study, and leads to the award of the degree of Bachelor of Science (Technology). Students are required to complete an approved program of industrial training of not less than twelve months prior to the award of the degree. Industrial training should normally be undertaken concurrently with attendance in the program, but with the approval of the Head of Department may be completed after completion of the prescribed program of study.

The program covers the same subject matter as the first three years of the full-time program: 3060. For the first two years students follow a common program in which general biology is taken, and thereafter specialise in the biological sciences, which are fundamental to the study of food science and technology. The courses of Stages 4, 5 and 6 may be available only in daytime classes, and substantial daytime release from industry may be required. Students who have completed the requirements of this program and have qualified for the award of the degree of Bachelor of Science (Technology) may proceed to the award of the degree of Bachelor of Science by attending for one full-time year and completing the courses listed in Year 4 of the full-time program. Students desiring to proceed to the award of a BSc degree must apply to the Head of the Department not later than 31 December of the year in which the sixth stage is completed.

Program Structure**Years 1 and 2**

BIOS1201	Molecules, Cells and Genes	(6 UOC)
FOOD1120	Introduction to Food Science	(6 UOC)
FOOD1130	The Food Industry	(6 UOC)
MATH1031	Mathematics for Life Sciences	(6 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)
PHYS1111	Fundamentals of Physics	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

Note: Physics, Mathematics and Statistics are usually taken as Stage 1, the other courses as Stage 2

Year 3

CHEM2921	Food Chemistry 1	(6 UOC)
FOOD1230	Food Choice	(6 UOC)
BIOC2181	Fundamentals of Biochemistry	(6 UOC)
BIOC2291	Fundamentals of Molecular Biology	(6 UOC)

Year 4

MICR2201	Fundamentals of Microbiology and Immunology	(6 UOC)
FOOD3220	Nutrition	(6 UOC)
General Education		(12 UOC)

Year 5

CHEM3811	Food Chemistry 2	(6 UOC)
FOOD2320	Food Microbiology	(6 UOC)
FOOD2330	Quality Assurance and Control	(6 UOC)
FOOD2340	Food Safety	(6 UOC)

Year 6

FOOD1360	Food Processing Principles	(6 UOC)
FOOD1370	Food Preservation: Principles and Applications	(6 UOC)
FOOD1380	Unit Operations in Food Processing	(6 UOC)
FOOD1390	Product Design and Development	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Chemical Engineering and Industrial Chemistry for more information.

Professional Recognition

Graduates of this program qualify for membership of the Australian Institute of Food Science and Technology, the US Institute of Food Technologists, and may qualify for membership of the Royal Australian Chemical Institute.

The program provides basic preparation for food science and technology careers in the food industry, the public sector, education, research, the food service industry, public health, management and marketing. Graduates may also find careers in health and environmental sciences, management of food resources and food wastes, and communication, and in areas such as dietetics after further training.

3100 Industrial Chemistry (Full-time)**Bachelor of Engineering BE****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Industrial Chemistry is a four-year professional program that is concerned with the application of science and technology to the chemical industry.

Successful completion of the program is accepted by the Royal Australian Chemical Institute and the Institution of Engineers, Australia as sufficient academic qualification for full corporate membership.

The Director of Teaching and Learning may approve various program patterns involving full-time and part-time study.

This program can form part of combined degrees with BE (Ind Chem) BSc (program 3102), BE (Ind Chem)/BA (program 3103), BE (Ind Chem)/BCom (Program 3715) and also the fast-track program BE (Ind Chem)/MEngSc (plan CEICL13100). For more details contact the Director of Teaching and Learning, School of Chemical Engineering & Industrial Chemistry.

Program Structure**Year 1**

CEIC1010	Introduction to the Chemical Industry	(3 UOC)
CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)

And ONE of the following courses:

PHYS1111	Fundamentals of Physics*	(6 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

And ONE of the following courses:

CEIC1030	Communication & Business Skills	(6 UOC)
PHYS1211	Energy and Environmental Physics	(6 UOC)

* If PHYS1111 is taken then PHYS1229 must be taken in S2

Year 2

CEIC2011	Instrumental Analysis - Theory	(3 UOC)
CEIC2012	Instrumental Analysis - Practical	(3 UOC)
CEIC2020	Introduction to Numerical Methods	(3 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CHEM2021	Organic Chemistry	(6 UOC)
CHEM2839	Inorganic Chemistry	(6 UOC)
INDC2040	Physical Process Chemistry	(6 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)
General Education		(3 UOC)

Year 3

BIOT3100	Fundamentals of Biotechnology	(3 UOC)
CEIC3010	Reaction Engineering	(4 UOC)
CEIC3070	Process Control	(4 UOC)

CEIC3110	Thermodynamics	(3 UOC)
CHEM3829	Organic Chemistry	(6 UOC)
INDC3051	Process Chemistry & Operation	(4 UOC)
INDC3110	Industrial & Environmental Chemistry	(6 UOC)
INDC3120	Industrial Chemistry Practice	(6 UOC)
POLY3011	Polymer Science	(3 UOC)
POLY3012	Polymer Science	(3 UOC)
General Education		(6 UOC)

Year 4

CEIC4070	Laboratory Automation Science	(4 UOC)
CEIC4105	Professional Electives	(3 UOC)
CEIC4120	Management & Plant Operation	(6 UOC)
INDC4061	Process Design A	(4 UOC)
INDC4062	Process Design B	(4 UOC)
INDC4091	Research Project Theory	(12 UOC)
INDC4092	Research Project	(12 UOC)
General Education		(3 UOC)

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3110 Industrial Chemistry (Part-time)**Bachelor of Science (Technology) BSc(Tech)****Typical Duration**

6 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

This six-year part-time program leading to the award of the degree of Bachelor of Science (Technology) in Industrial Chemistry is intended for students who are employed in relevant industry and who wish to prepare for a degree mainly by part-time attendance.

As part of the requirements for the award of the BSc(Tech) degree, students are required to complete an approved program of industrial training of not less than one year prior to the award of the degree. Industrial training should normally be completed concurrently with attendance in the program, but with the approval of the Head of School, may be completed after completion of the prescribed program of study.

Students who qualify for the award of the BSc(Tech) degree and who wish to proceed to the award of a BSc degree will normally be required to complete further work which will involve at least one year of full-time attendance.

Holders of the degree of BSc(Tech) or BSc(Eng) will be eligible to proceed to the award of the degree of Master of Science or Master of Engineering, refer to course regulations relating to these degrees.

Transfer is also possible from full-time programs to the part-time BSc(Tech) degree program, but a period of approved industrial experience must be gained before graduation. This requirement will apply to students transferring from BSc and BE degree programs within the Faculty.

Part time programs consist of first 3 years of the respective full-time program - undertaken over a six year period. Details of part time programs can be obtained from the Director of Teaching and Learning.

Program Structure

Please refer to the full-time BE Industrial Chemistry (Program 3100) and contact the School of Chemical Engineering & Industrial Chemistry for information regarding the Program Structure.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Chemical Engineering and Industrial Chemistry for more information.

Industrial Experience

Students are required to complete an approved program of industrial training of not less than one year prior to the award of the degree. Industrial training should normally be completed concurrently with attendance in the program, but with the approval of the Head of School, may be completed after completion of the prescribed program of study.

3042 Chemical Engineering/Bachelor of Science**Bachelor of Engineering Bachelor of Science BE BSc****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined program of five years full-time study enables a student in the school to qualify for the award of the two degrees of Bachelor of Engineering and Bachelor of Science (BE BSc). Graduates from this course will have a broader range of complementary computing and engineering skills that will greatly enhance both their employment and career prospects. The School of Chemical Engineering and Industrial Chemistry administers the program.

Program Structure**Year 1**

CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
COMP1011	Computing 1A	(6 UOC)
COMP1021	Computing 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)

And ONE of the following courses:

PHYS1111	Fundamentals of Physics	(6 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

Year 2

CEIC2011	Instrumental Analysis - Theory	(3 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CHEN2050	Chemical Engineering Laboratory 1	(3 UOC)
CHEN2061	Introduction to Process Chemistry 1	(6 UOC)
CHEN2062	Introduction to Process Chemistry 2	(3 UOC)
CHEN2140	Mass Transfer	(3 UOC)
COMP2011	Data Organisation	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)

Year 3

CEIC3010	Reaction Engineering	(4 UOC)
CEIC3070	Process Control	(4 UOC)
CEIC3110	Thermodynamics	(3 UOC)
CEIC4103	Professional Electives	(3 UOC)
CHEN3021	Systems Modelling & Analysis	(3 UOC)
CHEN3022	Process Modelling & Optimisation	(3 UOC)
CHEN3031	Advanced Transport Phenomena	(3 UOC)
CHEN3062	Particles, Separation, Heat Exchangers and Pressure Vessels	(6 UOC)
CHEN3065	Plant and Equipment Design	(4 UOC)
CHEN3080	Chemical Engineering Practice 2	(3 UOC)
COMP2021	Digital System Structures	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)

Year 4

CEIC2012	Instrumental Analysis - Practical	(3 UOC)
CEIC4104	Professional Electives	(3 UOC)
CHEN3067	Process Design & Economics	(3 UOC)
CHEN3068	Process Design & Safety	(3 UOC)

Plus Computing elective S1	(6 UOC)
Plus 2 Computing electives 6 UOC each S1 & S2	
Plus 2 Computing electives 6 UOC each S1 & S2	
Plus elective course* S2	(6 UOC)

Year 5

CEIC4070	Laboratory Automation Science	(4 UOC)
CEIC4101	Professional Elect Advanced	(3 UOC)
CEIC4102	Professional Electives Extended	(3 UOC)
CEIC4106	Professional Electives	(3 UOC)
CEIC4120	Management & Plant Operation	(6 UOC)
CHEN4031	Environmental Management 1	(3 UOC)
CHEN4081	Design Project	(8 UOC)
CHEN4091	Research Project Theory	(3 UOC)
CHEN4092	Research Project Practice	(12 UOC)
Plus elective course*		(3 UOC)

*either Computer Science or Chemical Engineering/Industrial Chemistry

Honours

For the award of Honours in the Chemical Engineering and Industrial Chemistry programs, students need to have distinguished themselves in the formal work, in other assignments as directed by the Head of the School, and in the final year project, for which a thesis is required.

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

It is compulsory that, before completion of the program, students in both the Chemical Engineering and Industrial Chemistry full-time programs must obtain a minimum of twelve weeks professionally oriented or industrial experience. Students in the part-time programs in Chemical Engineering and Industrial Chemistry must complete an approved program of industrial experience of not less than twelve months prior to the award of the degree.

Further Requirements

Students are expected to possess a calculator having exponential capabilities, however, more advanced calculators and personal computers, will be found useful. In examinations, students may be required to use calculators supplied by the University, so that no student will have an unfair advantage over another. Further information may be obtained from the Head of School.

Students of both Chemical Engineering and Industrial Chemistry are advised to have a copy of Perry J H Ed. Chemical Engineers Handbook 6th Ed. McGraw-Hill. This book is used extensively for most courses and units. Certain courses and units do not have specified textbooks and in these cases reference books are used or printed notes supplied.

If you are required to complete a varied program of physics or maths in your first year (i.e. General Maths or Fundamentals of Physics), then students are not permitted to undertake studies in higher options of other courses.

Professional Recognition

Successful completion of the BE degree program is accepted by the Institution of Chemical Engineers, the Institution of Engineers, Australia, and Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

3043 Chemical Engineering/Bachelor of Arts**Bachelor of Engineering Bachelor of Arts BE BA****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined program of five years full-time study enables a student in the school to qualify for the award of the degrees of Bachelor of Engineering and Bachelor of Arts. Since Engineering and Arts programs can have

a common content, such as mathematics and physics, approximately two additional sessions of study are required to gain the additional qualifications of Bachelor of Arts. In general this additional study is taken concurrently with the BE program and both can be completed within 10 sessions.

The program is open to all students who satisfy both the Chemical Engineering and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program after completion of at least one year if they have a credit or higher average or permission from the Head of School.

The BE BA programs are administered by the School of Chemical Engineering. The School requires the student to obtain the approval of the Faculty of Arts and Social Sciences for the BA components of their program. The School of Chemical Engineering must approve the final program timetable.

Program Structure

For the Program Structure, please refer to the Academic Rules below and contact the Faculty of Engineering for more information.

Honours

For the award of Honours in the Chemical Engineering and Industrial Chemistry programs, students need to have distinguished themselves in the formal work, in other assignments as directed by the Head of the School, and in the final year project, for which a thesis is required.

Academic Rules

1. Students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one sequence of study.

2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
European Studies
Environmental Studies*
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

*Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.

3. Except for courses completed as part of the Environmental Studies major sequence, no more than 12 units of credit may be obtained from courses in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE programs can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students must complete the full requirements of the program 3040 BE in Chemical Engineering or 3100 BE in Industrial Chemistry except that they are exempt from the General Education requirement of the BE BSc program. However, students will not be eligible for graduation for the BE

until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE BA program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

It is compulsory that, before completion of the program, students in both the Chemical Engineering and Industrial Chemistry full-time programs must obtain a minimum of twelve weeks professionally oriented or industrial experience. Students in the part-time programs in Chemical Engineering and Industrial Chemistry must complete an approved program of industrial experience of not less than twelve months prior to the award of the degree.

Further Requirements

Students are expected to possess a calculator having exponential capabilities, however, more advanced calculators and personal computers, will be found useful. In examinations, students may be required to use calculators supplied by the University, so that no student will have an unfair advantage over another. Further information may be obtained from the Head of School.

Students of both Chemical Engineering and Industrial Chemistry are advised to have a copy of Perry J H Ed. Chemical Engineers Handbook 6th Ed. McGraw-Hill. This book is used extensively for most courses and units. Certain courses and units do not have specified textbooks and in these cases reference books are used or printed notes supplied.

If you are required to complete a varied program of physics or maths in your first year (i.e. General Maths or Fundamentals of Physics), then students are not permitted to undertake studies in higher options of other courses.

Professional Recognition

Successful completion of the BE degree program is accepted by the Institution of Chemical Engineers, the Institution of Engineers Australia and Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

3715 Chemical Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook. Information about the program structure can be found in the Online Handbook program entry for 3715 BE BCom under the area of specialisation Chemical Engineering.

3048 Chemical Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

At the end of the 5th year, you will graduate with BE in Chemical Engineering and MBiomedE. The program is based on modified 3040 with additional courses in preparation for Masters. A summary is provided

below with further details in the section 'Graduate School of Biomedical Engineering'. Students must maintain a 65 Credit average to retain their enrolment in MBiomedE.

Program Structure

Year 1

BIOM1001	Professional Biomedical Studies	(3 UOC)
BIOM2010	Biomedical Engineering Practice	(3 UOC)
CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)
General Education		(3 UOC)

Year 2

CEIC2011	Instrumental Analysis - Theory	(3 UOC)
CEIC2012	Instrumental Analysis - Practical	(3 UOC)
CEIC2020	Introduction to Numerical Methods	(3 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CHEN2050	Chemical Engineering Laboratory 1	(3 UOC)
CHEN2061	Introduction to Process Chemistry 1	(6 UOC)
CHEN2062	Introduction to Process Chemistry 2	(3 UOC)
CHEN2140	Mass Transfer	(3 UOC)
ELEC0809	Electrical Engineering 1C	(3 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
Biomedical Engineering Elective		(6 UOC)

Year 3

BIOM9420	Clinical Laboratory Science	(6 UOC)
BIOT3100	Fundamentals of Biotechnology	(3 UOC)
CEIC3010	Reaction Engineering	(4 UOC)
CEIC3070	Process Control	(4 UOC)
CEIC3110	Thermodynamics	(3 UOC)
CHEN3021	Systems Modelling & Analysis	(3 UOC)
CHEN3022	Process Modelling & Optimisation	(3 UOC)
CHEN3031	Advanced Transport Phenomena	(3 UOC)
CHEN3062	Particles, Separation, Heat Exchangers and Pressure Vessels	(6 UOC)
CHEN3065	Plant and Equipment Design	(4 UOC)
CHEN3080	Chemical Engineering Practice 2	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)
General Education		(3 UOC)

Year 4

BIOM5930	Research Project A	(6 UOC)
CEIC4104	Professional Electives	(3 UOC)
CEIC4130	Plant Operation	(3 UOC)
CHEN3067	Process Design & Economics	(3 UOC)
CHEN3068	Process Design & Safety	(3 UOC)
PHPH2101	Physiology 1A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)
Biomedical Engineering ENG Electives		(18 UOC)

Year 5

BIOM5002	Thesis Part B	(9 UOC)
BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)
CEIC4070	Laboratory Automation Science	(4 UOC)
CHEN4031	Environmental Management 1	(3 UOC)
CHEN4081	Design Project	(8 UOC)
ONE Biomedical Engineering Elective		(6 UOC)

And one of the following options:

BIOM9913	Project Report	(12 UOC)
or		
TWO Biomedical Engineering Electives		(12 UOC)

Biomedical Electives

Preferred electives

BIOM9311	Mass Transfer in Medicine	(6 UOC)
BIOM9321	Physiological Fluid Mechanics	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9440	Biomedical Practical Measures	(6 UOC)
BIOM9613	Medical Instrumentation	(6 UOC)

Other electives

ANAT2511	Fundamentals of Anatomy	(6 UOC)
BIOM9027	Medical Imaging	(6 UOC)
BIOM9060	Biomedical Systems Analysis	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9541	Mechanics of the Human Body	(6 UOC)
BIOM9551	Biomechanics of Physical Rehabilitation	(6 UOC)
BIOM9601	Biomedical Applications of Microcomputers 1	(6 UOC)
BIOM9621	Biological Signal Analysis	(6 UOC)
BIOM9701	Dynamics of the Cardiovascular System	(6 UOC)

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

For the award of Honours in the Chemical Engineering and Industrial Chemistry programs, students need to have distinguished themselves in the formal work, in other assignments as directed by the Head of the School, and in the final year project, for which a thesis is required.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

Further Requirements

Students are expected to possess a calculator having exponential capabilities, however, more advanced calculators and personal computers, will be found useful. In examinations, students may be required to use calculators supplied by the University, so that no student will have an unfair advantage over another. Further information may be obtained from the Head of School.

Students of both Chemical Engineering and Industrial Chemistry are advised to have a copy of Perry J H Ed. Chemical Engineers Handbook 6th Ed. McGraw-Hill. This book is used extensively for most courses and units. Certain courses and units do not have specified textbooks and in these cases reference books are used or printed notes supplied.

If you are required to complete a varied program of physics or maths in your first year (i.e. General Maths or Fundamentals of Physics), then students are not permitted to undertake studies in higher options of other courses.

Professional Recognition

Successful completion of the BE degree program is accepted by the Institution of Chemical Engineers, the Institution of Engineers, Australia, and Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

3102 Industrial Chemistry/Bachelor of Science**Bachelor of Engineering Bachelor of Science BE BSc****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This combined program of five years full-time study enables a student in the school to qualify for the award of both BE in Industrial Chemistry and Bachelor of Science. Graduates from this program will have a broader range of complementary computing, chemistry and engineering skills that will greatly enhance both their employment and career prospects.

The School of Chemical Engineering and Industrial Chemistry administers the program.

Successful completion of the BE in Industrial Chemistry program is accepted by the Institution of Engineers Australia and the Royal Australian Chemical Institute as sufficient academic qualification for corporate membership.

Program Structure**Year 1**

CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
COMP1011	Computing 1A	(6 UOC)
COMP1021	Computing 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

Year 2

CEIC2011	Instrumental Analysis - Theory	(3 UOC)
CEIC2012	Instrumental Analysis - Practical	(3 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CHEM2021	Organic Chemistry	(6 UOC)
COMP2011	Data Organisation	(6 UOC)
INDC2040	Physical Process Chemistry	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)

Year 3

CEIC3010	Reaction Engineering	(4 UOC)
CEIC3070	Process Control	(4 UOC)
CEIC3110	Thermodynamics	(3 UOC)
CEIC4103	Professional Electives	(3 UOC)
CHEM2031	Inorganic Chemistry and Structure	(6 UOC)
COMP2021	Digital System Structures	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
INDC3051	Process Chemistry & Operation	(4 UOC)
INDC3110	Industrial & Environmental Chemistry	(6 UOC)
INDC3120	Industrial Chemistry Practice	(6 UOC)

Year 4

POLY3011	Polymer Science	(3 UOC)
POLY3012	Polymer Science	(3 UOC)
CEIC4101	Professional Electives Advanced	(3 UOC)
CEIC4102	Professional Electives Extended	(3 UOC)
2 x Computing Electives		(12 UOC)
2 x Computing Electives		(12 UOC)
Plus additional Elective Course 6 UOC (Either Computer Science or Chemical Engineering/Industrial Chemistry)		

Year 5

CEIC4070	Laboratory Automation Science	(4 UOC)
CEIC4105	Professional Electives	(3 UOC)
INDC4061	Process Design A	(4 UOC)
INDC4062	Process Design B	(4 UOC)
INDC4091	Research Project Theory	(12 UOC)
INDC4092	Research Project	(12 UOC)
Elective course*		(3 UOC)

*Either Computer Science or Chemical Engineering/Industrial Chemistry

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3103 Industrial Chemistry/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined program of five years full-time study enables a student in the school to qualify for the award of the degrees of Bachelor of Engineering and Bachelor of Arts. Since Engineering and Arts programs can have common content, such as mathematics and physics, ordinarily only two additional sessions of study are required to gain the additional qualifications of Bachelor of Arts. In general this additional study is taken concurrently with the BE program and both can be completed within 10 sessions.

This program is open to all students who satisfy both the Industrial Chemistry and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program after completion of at least one year if they have a credit or higher average or from permission by the Head of School.

The BE BA programs are administered by the School of Industrial Chemistry. The School requires the student to obtain the approval of the Faculty of Arts and Social Sciences for the BA components of their program. The School of Industrial Chemistry must approve the final program timetable.

Program Structure

Please refer to the Academic Rules below and contact the School of Industrial Chemistry and the Faculty of Arts and Social Sciences for information on the Program Structure.

Academic Rules

1. Students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one sequence of study.

2. Students must complete a major sequence (42 units of credit in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
European Studies
Environmental Studies*
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

* Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.

3. Except for courses completed as part of the Environmental Studies major sequences, no more than 12 units of credit may be obtained from subjects in the BA program which are offered by Schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE programs can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students must complete the full requirements of the program 3100 BE in Industrial Chemistry except that they are exempt from the General Studies requirement of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BSc program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3715 Industrial Chemistry/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook. Information about the program structure can be found in the Online Handbook program entry for 3715 BE BCom under the area of specialisation Industrial Chemistry.

Fast Track Programs with Master of Engineering Science

3040 Chemical Engineering/Master of Engineering Science

Plan CEICL13040

Bachelor of Engineering Master of Engineering Science BE MEngSc

Students may undertake a 4.5 years (10 semesters) full-time fast-track program leading to the awards of a Bachelor of Engineering and a Master of Engineering in Chemical Engineering.

Students undertake the first three years (6 semesters) of the BE program in Chemical Engineering. Subject to satisfying a minimum performance over these three years (see 'Rules for Progression and the Award of Degrees'), they

(a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year;

(b) undertake 12 units of credit of project/thesis work over the Summer (9th) semester; and

(c) undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

Students need to apply, at the end of Year 3, to the Director of Teaching and Learning for entry into the program. The School of Chemical Engineering and Industrial Chemistry administers the program.

Stage 1 to Stage 3

Same as program 3040

Total Units of Credit: 48 each Stage**Stage 4**

CEIC4070	Automation Science	(4 UOC)
	Selected Postgraduate Course	(6 UOC)
	Selected Postgraduate Course	(6 UOC)
CEIC4120	Management and Plant Operation	(6 UOC)
CHEN4031	Environmental Management 1	(3 UOC)
CHEN4081	Design Project	(8 UOC)
CHEN4091	Research Project Theory	(3 UOC)
CEIC4095	Special Research Project Practice	(9 UOC)
	General Education	(3 UOC)

Stage 5 (Summer Semester)

CEIC8320	Graduate Thesis	(12 UOC)

Stage 5 (Session 1)

4 postgraduate elective courses, totalling 24 UOC.

3100 Industrial Chemistry/Master of Engineering Science

Plan CEICL13100**Bachelor of Engineering Master of Engineering Science BE MEngSc**

Students may undertake a 4.5 years (10 semesters) full-time fast-track program leading to the awards of a Bachelor of Engineering and a Master of Engineering in Industrial Chemistry.

Students undertake the first three years (6 semesters) of the BE program in Industrial Chemistry. Subject to satisfying a minimum performance over these three years (see 'Rules for Progression and the Award of Degrees'), they

(a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year;

(b) undertake 12 units of credit of project/thesis work over the summer (9th) semester; and

(c) undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

Students need to apply, at the end of Year 3, to the Director of Teaching and Learning for entry into the program. The School of Chemical Engineering and Industrial Chemistry administers the program.

Stage 1 to Stage 3

Same as program 3100

Total Units of Credit: 24 each Stage**Stage 4**

CEIC4070	Automation Science	(4 UOC)
CEIC8XXX	Postgraduate Course	(6 UOC)
CEIC8XXX	Postgraduate Course	(6 UOC)
CEIC4120	Management and Plant Operation	(6 UOC)
INDC4061	Process Design A	(4 UOC)
INDC4062	Process Design B	(4 UOC)
CEIC4096	Research Project Theory Extended	(6 UOC)
CEIC4095	Special Research Project Practice	(9 UOC)
	General Education	(3 UOC)

Stage 5 (Summer Semester)

CEIC8320	Graduate Thesis	(12 UOC)

Stage 5 (Session 1)

4 CEIC8XXX postgraduate courses totalling 24 UOC

School of Civil and Environmental Engineering

Head of School: Professor NJ Ashbolt

Senior Administrative Officer: Ms KM Irvine

Executive Assistant: Vacant

The School undertakes teaching and research in the specialist disciplines of engineering construction and management, geotechnical engineering, structural engineering, transport engineering, water engineering and environmental engineering. The School comprises specialist staff with a broad spectrum of expertise across the disciplines of Civil and Environmental Engineering.

The Centre for Water and Waste Technology is located within the School. In addition to extensive laboratory facilities on the Kensington campus, the School operates the Heavy Structures Laboratory at Govett Street, Randwick, and the Water Research Laboratory at King Street, Manly Vale. The latter complex houses the School's Water Reference Library.

The School offers programs 3620 and 3625 leading to the award of degrees of Bachelor of Engineering in Civil Engineering (BE) and Bachelor of Engineering in Environmental Engineering (BE), at Pass or Honours level. In the Civil Engineering program, students may elect to major in structural engineering, geotechnical engineering, transport engineering, water engineering or engineering construction and management. These programs can be taken on a four year full-time basis, on a part-time basis or on a combined full-time/part-time basis subject to the approval of the Head of School. Intending part-time students are advised that all courses are offered only in the day-time. Part-time students will normally take two years for each equivalent full-time year. Alternatively, the programs may be taken in a sandwich form in which a student, after completing the first year of the program on a full-time basis, gains industrial experience during one or more periods of employment by taking leave of absence for an entire academic year.

The School also offers a range of combined degree programs which combine the Bachelor of Engineering degrees in Civil or Environmental Engineering with a range of other undergraduate degree programs and postgraduate degrees in engineering and other disciplines. These combined degree programs provide students with the opportunity to broaden their education and to complete two degrees with a significant saving in time. The combined degree programs include:

Five year full-time programs 3146 leading to the award of the degrees of Bachelor of Engineering in Civil Engineering and Bachelor of Engineering in Mining Engineering (BE BE), and 3631 leading to the degrees of Bachelor of Engineering in Civil Engineering and Bachelor of Engineering in Environmental Engineering (BE BE).

- Five year full-time programs 3730 and 3735 leading to the award of the degrees of Bachelor of Engineering in Civil and Environmental Engineering, respectively, and Bachelor of Science (BE BSc).
- Five year full-time programs 3621 and 3626 leading to the award of the degrees of Bachelor of Engineering in Civil and Environmental Engineering, respectively, and Bachelor of Arts (BE BA).
- Five and one half year full-time programs 3715 leading to the award of the degrees Bachelor of Engineering in Civil and Environmental Engineering and Bachelor of Commerce (BE BCom).
- Four and one half year full-time programs 3620 and 3625 leading to the award of the degrees of Bachelor of Engineering in Civil and Environmental Engineering, respectively, with 8612 Master of Engineering Science.
- Six year full-time programs 4775 and 4777 leading to the award of the degrees of Bachelor of Engineering in Civil and Environmental Engineering, respectively, and Bachelor of Laws (BE LLB).

The broad objective of the School's undergraduate programs is to develop well-educated graduates with the basic skills, attributes and knowledge required to practise as professional engineers. The desired skills are those that enable graduates to be problem solvers; critical thinkers; life long learners; good communicators; team players; independent investigators; effective managers; self-motivated; and economically, environmentally and socially aware.

It is intended that these attributes are developed in students at the same time that they gain knowledge in a broad range of disciplines. In addition, an objective of the programs is to provide the skills and knowledge in a social context. Integrating courses in each year of each program (the Engineering Practice courses) have been introduced to achieve this objective.

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours thesis in their final year. A weighted average is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1
General Education x 2
Year 2 x 2
Year 3 x 4
Year 4 x 5

Although Industrial training is now part of course CVEN4126 it is assigned a further nominal value of 3 units of credit in Year 4 in the Honours calculation. For combined degree programs, only the marks obtained in the standard Civil or Environmental Engineering courses are used in the calculation. A weighted average mark in the range of 65–69 will result in a recommendation for Honours 2/2. A weighted average mark in the range of 70–74 will result in a recommendation for Honours 2/1.

A weighted average mark of 75 and above will result in a recommendation for Honours 1.

Professional Recognition

Both the BE in Civil Engineering and the BE in Environmental Engineering are fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least 60 days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study.

Computing Requirements

Information regarding recommended computing equipment for the programs offered by the School is available on the website www.civeng.unsw.edu.au/currentstudents/general/computing/

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3620 Civil Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Civil Engineering offers opportunities to become involved in projects that enhance the overall quality of life. Civil engineers design, construct, manage, operate and maintain the infrastructure that supports modern society including buildings, bridges, roads and highways, tunnels, airfields, dams, ports and harbours, railways, new mines, water supply and sewerage schemes, irrigation systems and flood mitigation works. The profession is very broad and affords opportunities for involvement in many specialist activities.

In the Civil Engineering program students may elect to major in structural engineering, geotechnical engineering, transport engineering, water engineering or engineering construction and management. This program can be taken on a four-year full-time basis, on a part-time basis or on a combined full-time part-time basis subject to the approval of the Head of School. Intending part-time students are advised that all courses are offered only in the daytime. Part-time students will normally take two years for each equivalent full-time year. Alternatively, the program may be taken in a sandwich form in which a student, after completing the first year of the program on a full-time basis, gains industrial experience during one or more periods of employment by taking leave of absence for an entire academic year.

The School also offers the combined degrees BE (Civil Eng)/BE (Mining Eng) (program 3146), BE (Civil Eng)/BE (Env Eng) (program 3631), BE (Civil Eng)/BA (program 3621), BE (Civil Eng)/BSc (program 3730), BE (Civil Eng)/BCom (program 3715), BE (Civil Eng)/LLB (Law) (program 4775), and also the fast track program BE/MEngSc (plan CVENG13620).

Program Objectives and Learning Outcomes

The broad objective of the School's undergraduate programs is to develop well-educated graduates with the basic skills, attributes and knowledge required to practise as professional engineers. The desired skills are those that enable graduates to be problem solvers; critical thinkers; life long learners; good communicators; team players; independent investigators; effective managers; self-motivated; and economically, environmentally and socially aware.

It is intended that these attributes are developed in students at the same time that they gain knowledge in a broad range of disciplines. In addition, an objective of the programs is to provide the skills and knowledge in

a social context. Integrating courses in each year of each program (the Engineering Practice courses) have been introduced to achieve this objective.

Program Structure

Plan CVENA13620

Year 1

CVEN1021	Civil Engineering Practice 1A	(4 UOC)
CVEN1022	Civil Engineering Practice 1B	(6 UOC)
CVEN1023	Statics	(4 UOC)
CVEN1024	Dynamics	(4 UOC)
CVEN1025	Computing	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)
PHYS1279	Physics 1 (Civil Engineering)	(4 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

CVEN2022	Civil Engineering Practice 2	(3 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2026	Engineering Materials 2	(3 UOC)
CVEN2125	Systems Engineering	(3 UOC)
CVEN2126	Engineering Construction 1	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
CVEN2322	Structural Engineering 1	(6 UOC)
CVEN2525	Intro to Water Engineering	(3 UOC)
GMAT0442	Surveying for Civil Engineers	(3 UOC)
GMAT0491	Survey Camp	(3 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)
	General Education	(6 UOC)

Year 3

CVEN3023	Civil Engineering Practice 3A	(3 UOC)
CVEN3024	Civil Engineering Practice 3B	(3 UOC)
CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3125	Engineering Construction 2	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3322	Structural Engineering 2	(6 UOC)
CVEN3324	Structural Engineering 3	(3 UOC)
CVEN3438	Transport Planning and Environment	(3 UOC)
CVEN3448	Transport Engineering	(3 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
	General Education	(6 UOC)

Year 4

Session One

Students achieving a School weighted average mark exceeding 62 (calculated from all courses in Years 1 to 3 of the BE program) are eligible to undertake an Honours thesis in Year 4 (CVEN4000 in S1 and CVEN4001 in S2).

CVEN4126	Engineering Management 2	(3 UOC)
CVEN4225	Geotechnical Engineering 4	(3 UOC)
CVEN4323	Structural Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)

Plus TWO of the following four electives:

CVEN4000	Honours Thesis Part A	(6 UOC)
CVEN4027	Civil Engineering Practice 4A	(6 UOC)
CVEN4028	Civil Engineering Practice 4B	(6 UOC)
CVEN4029	Civil Engineering Practice 4C	(6 UOC)

Session Two

All students not undertaking the Honours thesis are required to select two majors. Students undertaking the Honours thesis are required to undertake one major plus at least 8 units of credit of electives taken from one other discipline area. To complete a major, all three 4 units of credit elective subjects (listed for each discipline below) must be undertaken.

CVEN4001	Honours Thesis Part B	(4 UOC)

Construction and Management Major

CVEN4139	Advanced Construction and Project Management	(4 UOC)
CVEN4149	Professional Level Project Management Tools and Skills	(4 UOC)
CVEN4159	Advanced Construction Technology and Engineering	(4 UOC)

Geotechnical Engineering Major

CVEN4279	Rock and Slope Engineering	(4 UOC)
CVEN4289	Site Investigations and Dam Engineering	(4 UOC)
CVEN4299	Advanced Topics in Geotechnical Engineering	(4 UOC)

Structural Engineering Major

CVEN4339	Design of Bridges	(4 UOC)
CVEN4349	Special Topics in Concrete, Steel and Composite Structures	(4 UOC)
CVEN4359	Structural Analysis and Finite Elements	(4 UOC)

Transport Engineering Major

CVEN4439	Transport Operations and Systems Design	(4 UOC)
CVEN4449	Traffic Management and Control	(4 UOC)
CVEN4459	Transport and Environment	(4 UOC)

Water Engineering Major

CVEN4539	Advanced Water Quality and Treatment	(4 UOC)
CVEN4549	Advanced Catchment and Coastal Processes	(4 UOC)
CVEN4559	Advanced Water Engineering	(4 UOC)

The School offers a range of specialist plans in the civil engineering program, which are available to high achieving students. Basically students complete most of the requirements of the standard plan CVENA13620 with specialist replacements for some courses in Years 2, 3 and especially Year 4 of the program. Students achieving a School weighted average mark of less than 65 (calculated from all courses in Years 1 to 3 of the BE program) are ineligible to continue in the plan and must transfer into and complete the standard Year 4 of the academic plan CVENA1 3620.

CVENJS3620 Civil and Structural Engineering Plan**Year 2**

Replace CVEN2022 with CVEN2032 Civil/ Structural Engineering Practice 2

Year 3

Replace CVEN3023 with CVEN3032 Civil/Structural Engineering Practice 3A
Replace CVEN3024 with CVEN3033 Civil/ Structural Engineering Practice 3B

Year 4

Replace CVEN4526 with CVEN4324 Structural Engineering Case Study CVEN4339, CVEN4349 and CVEN4359 are compulsory

CVENKS3620 Civil and Geotechnical Engineering Plan**Year 2**

Replace CVEN2022 with CVEN2062 Civil/Geotechnical Engineering Practice 2

Year 3

Replace CVEN3023 with CVEN3062 Civil/Geotechnical Engineering Practice 3A
Replace CVEN3024 with CVEN3063 Civil/Geotechnical Engineering Practice 3B

Year 4

Replace CVEN4526 with CVEN4226 Engineering Geology and Geotechnical Models
CVEN4279, CVEN4289 and CVEN4289 are compulsory

CVENLS3620 Civil Engineering and Project Management Plan**Year 2**

Same as CVENA1 3620

Year 3

Replace CVEN3023 with CVEN3012 Civil Engineering and Project Management Practice 3A
Replace CVEN3024 with CVEN3013 Civil Engineering and Project Management Practice 3B
Replace CVEN3438 with CVEN3127 Management of Projects

Year 4

Replace CVEN4526 with CVEN4127 Planning and Control of Projects
CVEN4139, CVEN4149 and CVEN4159 are compulsory

CVENMS3620 Civil and Transport Engineering Plan**Year 2**

Same as CVENA1 3620

Year 3

Replace CVEN3023 with CVEN3042 Civil/Transport Engineering Practice 3A
Replace CVEN3024 with CVEN3043 Civil/Transport Engineering Practice 3B

Year 4

Replace CVEN4526 with CVEN4421 Transport Engineering 2
CVEN4439, CVEN4449 and CVEN4459 are compulsory

CVENNS3620 Civil, Water and Coastal Engineering Plan**Year 2**

Replace CVEN2022 with CVEN2052 Civil/Water Engineering Practice 2

Year 3

Replace CVEN3023 with CVEN3052 Civil/Water Engineering Practice 3A
Replace CVEN3024 with CVEN3053 Civil/Water Engineering Practice 3B
Replace CVEN3125 with CVEN3528 Sustainable Catchment and Coastal Systems

Year 4

Replace CVEN4126 with CVEN4533 Transport and Fate of Pollutants
CVEN4539, CVEN4549 and CVEN4559 are compulsory

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours Thesis in their Final Year. A School weighted average mark is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1
General Education x 2
Year 2 x 2
Year 3 x 4
Year 4 x 5

Industrial training is assigned a nominal value of 3 units of credit in Year 4 in the Honours calculation. For combined degree programs only the marks obtained in the standard Civil or Environmental Engineering courses are used in the calculation.

A School weighted average mark in the range of 65.0-69.9 will result in a recommendation for Honours 2/2. A School weighted average mark in the range of 70.0-74.9 will result in a recommendation for Honours 2/1. A School weighted average mark of 75.00 and above will result in a recommendation for Honours 1.

Academic Rules

For program rules relating to the Bachelor of Engineering and General Rules for Progression, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

Professional Recognition

The BE in Civil Engineering is fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission

to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

3625 Environmental Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Environmental engineers are concerned with the environmental impact of engineering activities. They apply their broad knowledge of engineering and environmental processes in identifying environmental problems and in developing effective solutions to them. They also coordinate the activities of specialist groups such as biologists, ecologists and geologists within major projects. The discipline of environmental engineering embraces parts of civil engineering, with emphasis on management, systems design, water, geotechnical and transport engineering, together with aspects of chemical engineering, applied and biological sciences and environmental studies.

The School also offers the combined degrees BE (Civil Eng)/BE (Env Eng) (program 3631), BE (Env Eng)/BA (program 3626), BE (Env Eng)/BSc (program 3735), BE (Env Eng)/BCom (program 3715) BE (Env Eng)/LLB (Law) (program 4777) and also the fast track program BE/MEngSc (plan CVENH13625).

Program Objectives and Learning Outcomes

The broad objective of the School's undergraduate programs is to develop well-educated graduates with the basic skills, attributes and knowledge required to practise as professional engineers. The desired skills are those that enable graduates to be problem solvers; critical thinkers; life long learners; good communicators; team players; independent investigators; effective managers; self-motivated; and economically, environmentally and socially aware.

It is intended that these attributes are developed in students at the same time that they gain knowledge in a broad range of disciplines. In addition, an objective of the programs is to provide the skills and knowledge in a social context. Integrating courses in each year of each program (the Engineering Practice courses) have been introduced to achieve this objective.

Program Structure

Year 1

CVEN1023	Statics	(4 UOC)
CVEN1024	Dynamics	(4 UOC)
CVEN1025	Computing	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)
CVEN1531	Introduction to Water and Atmospheric Chemistry	(4 UOC)
CVEN1721	Environmental Engineering Practice 1A	(4 UOC)
CVEN1722	Environmental Engineering Practice 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

Year 2

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CEIC0010	Mass Transfer and Material Balances	(3 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2125	Systems Engineering	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
CVEN2525	Introduction to Water Engineering	(3 UOC)

CVEN2722	Environmental Engineering Practice 2	(3 UOC)
GEOS1711	Planet Earth	(3 UOC)
GMAT0753	Introduction to Spatial Information Systems	(3 UOC)
INDC4120	Chemistry of the Industrial Environment	(3 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)
General Education		(6 UOC)

Year 3

BIOS3301	Population and Community Ecology for Environmental Engineers	(3 UOC)
CEIC0050	Atmospheric Process Chemistry	(3 UOC)
CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3438	Transport Planning and Environment	(3 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
CVEN3531	Aquatic Chemistry	(3 UOC)
CVEN3723	Environmental Engineering Practice 3A	(3 UOC)
CVEN3724	Environmental Engineering Practice 3B	(3 UOC)
CVEN3725	Waste Management	(3 UOC)
CVEN3726	Environmental Policy	(3 UOC)
General Education		(6 UOC)

Year 4

Session One

Students achieving a School weighted average mark exceeding 62 (calculated from all subjects in years 1 to 3 of the BE Program) are eligible to undertake an Honours thesis in Year 4 (CVEN4000 in S1 and CVEN4001 in S2).

CVEN4126	Engineering Management 2	(3 UOC)
CVEN4225	Geotechnical Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)
CVEN4533	Transport & Fate of Pollutants	(3 UOC)

Plus TWO of the following four electives:

CVEN4000	Honours Thesis Part A	(6 UOC)
CVEN4727	Environmental Engineering Practice 4A	(6 UOC)
CVEN4728	Environmental Engineering Practice 4B	(6 UOC)
CVEN4729	Environmental Engineering Practice 4C	(6 UOC)

Session Two

All students not undertaking the Honours thesis are required to select two majors. Students undertaking the Honours thesis are required to undertake one major plus at least 8 units of credit of electives taken from one other discipline area. To complete a major, all three 4 units of credit elective courses (listed for each discipline below) must be undertaken.

CVEN4001	Honours Thesis Part B	(4 UOC)

Geotechnical Engineering Major

CVEN4269	Environmental Geotechnics	(4 UOC)
CVEN4289	Site Investigations and Dam Engineering	(4 UOC)

Plus ONE of the following two electives:

CVEN4279	Rock and Slope Engineering	(4 UOC)
CVEN4299	Advanced Topics in Geotechnical Engineering	(4 UOC)

Transport Engineering Major

CVEN4439	Transport Operations and Systems Design	(4 UOC)
CVEN4449	Traffic Management and Control	(4 UOC)
CVEN4459	Transport and Environment	(4 UOC)

Water Engineering Major

CVEN4539	Advanced Water Quality and Treatment	(4 UOC)
CVEN4549	Advanced Catchment and Coastal Processes	(4 UOC)
CVEN4569	Advanced Environmental Systems	(4 UOC)

Chemical Engineering Major

CEIC3010	Reaction Engineering	(4 UOC)
CHEN2062	Introduction to Process Chemistry 2	(3 UOC)
CEIC3070	Process Control	(4 UOC)

Geography Major

Any TWO of the following three courses:

GEOH3921	Coastal Resource Management	(6 UOC)
GEOS3731	Geomorphology	(6 UOC)
GEOS3761	Environmental Change	(6 UOC)

The School offers a range of specialist plans in the Environmental Engineering program which are available to high achieving students. Basically students complete most of the requirements of the standard

plan CVENBS3625 with specialist replacements for some courses in Years 2, 3 and especially Year 4 of the program. Students achieving a School weighted average mark of less than 65 (calculated from all courses in Years 1 to 3 of the BE program) are ineligible to continue in the plan and must transfer into and complete the standard Year 4 of the academic plan CVENB13625.

CVENPS3625 Environmental and Geotechnical Engineering Plan

Year 2

Replace CVEN2722 with CVEN2732 Environmental/Geotechnical Engineering Practice 2

Year 3

Replace CVEN3438 with CVEN3225 Geotechnical Mapping and Logging

Replace CVEN3723 with CVEN3733 Environmental/Geotechnical Engineering Practice 3A

Replace CVEN3724 with CVEN3734 Environmental/Geotechnical Engineering Practice 3B

Year 4

Replace CVEN4126 with CVEN4226 Engineering Geology and Geotechnical Models

CVEN4269, CVEN4279 and CVEN4289 are compulsory.

CVENQS3625 Environmental and Transport Engineering Plan

Year 2

Same as CVENB13625

Year 3

Replace CVEN3531 with CVEN3448 Transport Engineering

Replace CVEN3723 with CVEN3743 Environmental/Transport Engineering Practice 3A

Replace CVEN3724 with CVEN3744 Environmental/Transport Engineering Practice 3B

Year 4

replace CVEN4126 with CVEN4421 Transport Engineering 2

CVEN4439, CVEN4449 and CVEN4459 are compulsory

CVENRS3625 Environmental, Water and Waste Engineering Plan

Year 2

Replace CVEN2722 with CVEN2752 Environmental/Water Engineering Practice 2

Year 3

Replace CEIC0050 with CVEN3528 Sustainable Catchment and Coastal Systems

Replace CVEN3723 with CVEN3753 Environmental/Water Engineering Practice 3A

Replace CVEN3724 with CVEN3754 Environmental/Water Engineering Practice 3B

Year 4

Replace CVEN4126 with CVEN4528 Surf, Water and Groundwater Environments

CVEN4539, CVEN4549 and CVEN4569 are compulsory

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours Thesis in their Final Year. A School weighted average mark is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1

General Education x 2

Year 2 x 2

Year 3 x 4

Year 4 x 5

Industrial training is assigned a nominal value of 3 units of credit in Year 4 in the Honours calculation. For combined degree programs only the marks obtained in the standard Civil or Environmental Engineering courses are used in the calculation. A School weighted average mark in the range of 65.0-69.9 will result in a recommendation for Honours 2/2. A School weighted average mark in the range of 70.0-74.9 will result in a recommendation for Honours 2/1. A School weighted average mark of 75.00 and above will result in a recommendation for Honours 1.

Academic Rules

For program rules relating to the Bachelor of Engineering and General Rules for Progression, please refer to the 'Rules for Progression and Award of Degrees under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Professional Recognition

The BE in Environmental Engineering is fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

3730 Civil Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may seek to undertake a five-year full-time combined program leading to the award of the degrees of Bachelor of Engineering in Civil Engineering and Bachelor of Science (BE BSc). The School of Civil and Environmental Engineering administer the program. Students should seek advice from the School Office.

With the combined degree program, students can add their choice of a Science, Mathematics or Computer Science program to the standard, professionally accredited Civil Engineering program offered by the School of Civil and Environmental Engineering.

The School of Civil and Environmental Engineering is the academic unit responsible for the program. The School will consult with the Faculty of Science in approving the BSc component of the program.

Students must satisfy admission requirements for both the BE in Civil Engineering and BSc programs or may transfer from the BE in Civil Engineering program after completion of at least one year, if they have a Credit or higher average.

Course credits can accrue simultaneously for both component degrees where there is an overlap of courses from the Civil Engineering program and Science program.

Program Structure

CVENA13730 + Science Plan

Year 1

All the Year 1 courses in the Civil Engineering program.

Year 2

The Year 2 courses in the Civil Engineering program except that 12 units of credit of Science courses are substituted for CVEN2222, CVEN2022 and General Education.

Year 3

Science courses to total at least 36 units of credit and CVEN2222, CVEN2022, CVEN3025, CVEN3125

Year 4

Science courses to total at least 18 units of credit and CVEN3126, CVEN3222, CVEN3223, CVEN3322, CVEN3324, CVEN3438, CVEN3448, CVEN3526, CVEN3527.

Year 5

Science courses to total at least 6 units of credit in S1 in lieu of one civil engineering major (12 units of credit). Otherwise standard Year 4 program in Civil Engineering.

The degrees of Bachelor of Engineering and Bachelor of Science may be conferred as a Pass degree or as an Honours degree. There are two classes of Honours, Class 1 and Class 2 in two divisions. The award and grade of Honours in the BE are made in recognition of superior performance throughout the program with a greater weighting on courses in the later years. The BSc can be awarded Honours on the successful completion of an Honours year. It should be noted that entry into a particular Honours program might require completion of additional courses.

Academic Rules

1. The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Engineering and Bachelor of Science (BE BSc).
2. The five years of the program include at least 108 units of credit in the Science program and a minimum of 240 units of credit in total.
3. The 108 Science program units of credit must include a minimum of 36 and a maximum of 48 level 1 units of credit and all courses prescribed in a specific program as outlined in the Science section in this Handbook must be completed. A major sequence (42 units of credit of Level 2 and 3 courses with at least 18 units of credit of Level 3 courses) in a Science discipline is also a requirement of the Science program.
4. Students must satisfy the normal prerequisites for entry to Bachelor of Science Program and to individual courses therein. Also, students must satisfy the normal prerequisites for entry to Civil Engineering and to individual courses therein.
5. Students desiring to enrol in the BSc degree program at Honours level are not able to complete the program in five years and must obtain approval from the School of Civil and Environmental Engineering and the Faculty of Science for their programs. With the approval of the relevant school and of the Head of the School of Civil and Environmental Engineering, a student may follow a standard Honours program in the Science program which can be completed by an additional year of study.
6. The degrees of Bachelors of Engineering and Bachelor of Science are not awarded until the completion of the full five-year program.
7. Students contemplating enrolling in this program should consult fully with the Faculty of Science and with the School of Civil and Environmental Engineering before enrolment.
8. There will be a testamur for each degree in the combined program.
9. Students must complete the full requirements of the BE in Civil Engineering (code 3620) except that:
 - a) CVEN3023 and CVEN3024 are exempted;
 - b) the General Education requirement is exempted; and
 - c) a final year engineering major (12 units of credit) is exempted.
10. Group A and Group B courses listed in Rule 12 below will count towards satisfying requirements of both rules 2 and 9 above. The courses in Group B may not satisfy requirements for progression within science programs.
11. Students may apply for exemption from the requirements of Rule 9 for the courses listed in Rule 12 below in Group B on the basis of courses/requirements in parentheses.
12. Exemptions will be granted for the courses in Group C below with respect to Rule 9 on the basis of the requirements within parentheses.

Group A

MATH1131 or MATH1141, MATH1231 or MATH1241, CHEM1011 or CHEM1031, PHYS1279

Group B

PHYS1279 (PHYS1121), CHEM1011 (CHEM1021), MATH2019 (at least 12 units of credit of non-statistics level II mathematics), CVEN2025 (at least 3 units of credit of level II Statistics).

Group C

CVEN3025 (at least 3 units of credit of level III Applied Mathematics).

13. Students wishing to major in Physics must consult with the School of Physics and the School of Civil & Environmental Engineering in regards to choice of courses.
14. A typical structure of a combined Engineering/Science program is set out above in the Program Structure section. Subject to timetable restrictions, the full range of Science programs is available to Civil Engineering students.
15. The total units of credit in the program is 240.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

Professional Recognition

The BE in Civil Engineering is fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

3621 Civil Engineering/Bachelor of Arts**Bachelor of Engineering Bachelor of Arts BE BA****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program, students can add their choice of an Arts program to the standard, professionally accredited Civil Engineering (3620) program offered by the School of Civil and Environmental Engineering. It provides flexibility in the choice of courses within the full Arts program and enables students to gain a broad education in Arts and Social Sciences, as well as specialised studies in Civil Engineering.

Because Engineering and Arts programs can have a common content, such as mathematics and physics, two additional sessions of study is required to gain the additional qualification of Bachelor of Arts. In general, this additional study is taken concurrently with the BE program and both can be completed in ten sessions.

Eligibility

The program is open to all students who satisfy both the Civil Engineering (3620) and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program after completion of at least one year if they have a credit or higher average. Transfer after the second year may result in students taking more than minimum time to complete the combined program.

Organisation

The BE BA program is administered by the School of Civil and Environmental Engineering. The School will consult with the Faculty of Arts and Social Sciences in approving the BA component of the program. The School of Civil and Environmental Engineering must approve the final program and timetable.

Students should start discussing their program with representatives of the School and the Faculty of Arts and Social Sciences as early as possible. Students should themselves determine the Arts program that they wish to undertake. The Arts and Social Sciences section in this Handbook describes the options. There are no special rules on what courses should be included in each year. Students should schedule the Arts and Engineering components to suit their preferences, while meeting the constraints of timetables and prerequisites.

Program Objectives and Learning Outcomes

The broad objective of the School's undergraduate programs is to develop well-educated graduates with the basic skills, attributes and knowledge required to practise as professional engineers. The desired skills are those that enable graduates to be problem solvers; critical thinkers; life long learners; good communicators; team players; independent investigators; effective managers; self-motivated; and economically, environmentally and socially aware.

It is intended that these attributes are developed in students at the same time that they gain knowledge in a broad range of disciplines. In addition, an objective of the programs is to provide the skills and knowledge in a social context. Integrating courses in each year of each program (the Engineering Practice courses) have been introduced to achieve this objective.

Program Structure

CVENA13621 and Arts Plan

Please refer to the Academic Rules below and contact the School of Civil and Environmental Engineering for information on the Program Structure of this degree.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours Thesis in their Final Year. A School weighted average mark is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1

Year 2 x 2

Year 3 x 4

Year 4 x 5

Industrial training is assigned a nominal value of 3 units of credit in Year 4 in the Honours calculation. For combined degree programs only the marks obtained in the standard Civil or Environmental Engineering courses are used in the calculation. A School weighted average mark in the range of 65.0-69.9 will result in a recommendation for Honours 2/2. A weighted average mark in the range of 70.0-74.9 will result in a recommendation for Honours 2/1. A weighted average mark of 75.0 and above will result in a recommendation for Honours 1.

Academic Rules

1. Students must complete 60 units of credit in the BA program, with no more than 24 units of credit obtained at Level 1 (ie in courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one sequence of study.

2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
European Studies
Film
French
German Studies
Greek
History
History & Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology and Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

3. Except for courses completed as part of the major sequence, no more than 12 units of credit may be obtained from courses in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE program can be included in the 60 units of credit required at Rule 1 for the BA program

5. Students must complete the full requirements of Program 3620 BE in Civil Engineering except that they are exempt from the General Education requirements of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA program have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of Honours year. It should be noted that entry into a particular BA Honours program might require completion of courses additional to those specified under Rules 1-4.

8. The total units of credit in the program is 240

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under Faculty Information and Assistance in this Handbook.

Industrial Experience

Industrial experience is an integral part of the program. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Professional Recognition

The BE in Civil Engineering is fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

3715 Civil Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

4775 Civil Engineering/Bachelor of Laws

Bachelor of Engineering Bachelor of Laws BE LLB

CVENA14775 and Laws Plan

This program provides students with professional qualifications in areas of very great importance to the community. The program is attractive to students who have in mind a career involving construction or general engineering and the law. Most large developments raise a formidable range of legal issues and there is a need for highly qualified personnel who are able to understand both the engineering and the legal dimensions of development, both in Australia and overseas.

The Faculty of Law administers this program. For full details, see the entry under the Faculty of Law in this Handbook.

3146 Civil Engineering/Mining Engineering

Bachelor of Engineering Bachelor of Engineering BE BE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may enrol directly into Program 3146 or apply to transfer from Program 3620 (Civil Engineering) any time before the commencement of Year 4. The first three years of the combined degree program are identical to program 3620. The first three years is administered by the School of Civil & Environmental Engineering, with the final two years administered by the School of Mining Engineering. Students aim to complete the mining requirements in four additional sessions.

Students considering this option should discuss the above arrangements with the relevant program authorities.

Program Structure

Plans CVENAD3146 and MINEFD3146 (Full-time program)

Year 1

CVEN1021	Civil Engineering Practice 1A	(4 UOC)
CVEN1022	Civil Engineering Practice 1B	(6 UOC)
CVEN1023	Statics	(4 UOC)
CVEN1024	Dynamics	(4 UOC)
CVEN1025	Computing	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)
PHYS1279	Physics 1 (Civil Engineering)	(4 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Total hours per week - Session 1: 20

Total hours per week - Session 2: 20

Total units of credit: 48

Year 2

CVEN2022	Civil Engineering Practice 2	(3 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2026	Engineering Materials 2	(3 UOC)
CVEN2125	Systems Engineering	(3 UOC)
CVEN2126	Engineering Construction 1	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
CVEN2322	Structural Engineering 1	(6 UOC)
CVEN2525	Introduction to Water Engineering	(3 UOC)
GMAT0442	Surveying for Civil Engineers	(3 UOC)
GMAT0491	Survey Camp	(3 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)
	General Education	(6 UOC)

Total Hours per week - Session 1: 20

Total hours per week - Session 2: 20

Total units of credit: 48

Year 3

CVEN3023	Civil Engineering Practice 3A	(3 UOC)
CVEN3024	Civil Engineering Practice 3B	(3 UOC)
CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3125	Engineering Construction 2	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3322	Structural Engineering 2	(6 UOC)
CVEN3324	Structural Engineering 3	(3 UOC)
CVEN3438	Transport Planning and Environment	(3 UOC)
CVEN3448	Transport Engineering	(3 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
	General Education	(6 UOC)

Total hours per week - Session 1: 22

Total hours per week - Session 2: 22

Total units of credit: 48

Year 4

Session One

CVEN4225	Geotechnical Engineering 4	(3 UOC)
MINE3410	Coal Mining Systems	(6 UOC)
MINE3420	Metal Mining Systems	(6 UOC)

Choose one of the following courses:

CVEN4126	Engineering Management 2	(3 UOC)
CVEN4323	Structural Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)

Choose one of the following courses:

CVEN4027	Civil Engineering Practice 4A	(6 UOC)
CVEN4028	Civil Engineering Practice 4B	(6 UOC)
CVEN4029	Civil Engineering Practice 4C	(6 UOC)

Total hours per week Session 1: 18

Total units of credit: 24

Session Two

Choose one major comprising 12 units of credit

Construction and Management Major

CVEN4139	Advanced Construction and Project Management	(4 UOC)
CVEN4149	Professional Level Project Management Tools and Skills	(4 UOC)
CVEN4159	Advanced Construction Technology and Engineering	(4 UOC)

Structural Engineering Major

CVEN4339	Design of Bridges	(4 UOC)
CVEN4349	Special Topics in Concrete, Steel and Composite Structures	(4 UOC)
CVEN4359	Structural Analysis and Finite Elements	(4 UOC)

Transport Engineering

CVEN4439	Transport Operations and Systems Design	(4 UOC)
CVEN4449	Traffic Management and Control	(4 UOC)
CVEN4459	Transport and Environment	(4 UOC)

Water Engineering Major

CVEN4539	Advanced Water Quality and Treatment	(4 UOC)
CVEN4549	Advanced Catchment and Coastal Processes	(4 UOC)
CVEN4559	Advanced Water Engineering	(4 UOC)

MINE3500	Mine Workplace Environment	(6 UOC)
MINE3710	Mine Economics and Business Systems	(6 UOC)

Total hours per week Session 2: 21

Total units of credit: 24

Year 5

MINE4210	Mine Planning	(6 UOC)
MINE4300	Geotechnical Engineering	(6 UOC)
MINE4410	Industry Applications	(6 UOC)
MINE4420	Thesis A	(6 UOC)
MINE4500	Sustainable Mining Practices	(3 UOC)
MINE4700	Mining Law	(6 UOC)

And one of the following courses:

MINE4220	Coal Mine Design and Evaluation Project	(9 UOC)
MINE4230	Metal Mine Design and Evaluation Project	(9 UOC)
MINE4240	Mine Design and Evaluation	(9 UOC)

And choose two from the following three electives:

MINE4800	Mine Simulation and Modelling	(3 UOC)
MINE4805	Mineral Process Technology	(3 UOC)
MINE4810	Comp Methods in Geomechanics	(3 UOC)

Academic Rules

For program rules relating to the Bachelor of Engineering and General Rules for Progression, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3631 Civil Engineering/Environmental Engineering

Bachelor of Engineering Bachelor of Engineering BE BE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The program provides students with professional qualifications in areas of great importance to the community. The program is attractive to students who have in mind a career involving environmental issues and infrastructure development. The School of Civil and Environmental Engineering administers the program.

Program Structure

Plans CVENAD3631 and CVENBD3631

Year 1

CVEN1021	Civil Engineering Practice 1A	(4 UOC)
CVEN1022	Civil Engineering Practice 1B	(6 UOC)
CVEN1023	Statics	(4 UOC)

CVEN1024	Dynamics	(4 UOC)
CVEN1025	Computing	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)
PHYS1279	Physics 1 (Civil Engineering)	(4 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2026	Engineering Materials 2	(3 UOC)
CVEN2126	Engineering Construction 1	(3 UOC)
CVEN2322	Structural Engineering 1	(6 UOC)
CVEN2525	Introduction to Water Engineering	(3 UOC)
GEO1711	Planet Earth	(3 UOC)
GMAT0442	Surveying for Civil Engineers	(3 UOC)
GMAT0491	Survey Camp	(3 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)
General Education		(6 UOC)

Year 3

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CEIC0010	Mass Transfer and Material Balances	(3 UOC)
CVEN2125	Systems Engineering	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3322	Structural Engineering 2	(6 UOC)
CVEN3324	Structural Engineering 3	(3 UOC)
CVEN3438	Transport Planning and Environment	(3 UOC)
CVEN3448	Transport Engineering	(3 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
GMAT0753	Introduction to Spatial Information Systems	(3 UOC)
INDC4120	Chemistry of the Industrial Environment	(3 UOC)

And ONE of the following courses:

CVEN2022	Civil Engineering Practice 2	(3 UOC)
CVEN2722	Environmental Engineering Practice 2	(3 UOC)

Year 4

BIOS3301	Population and Community Ecology for Environmental Engineers	(3 UOC)
CEIC0050	Atmospheric Process Chemistry	(3 UOC)
CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3125	Engineering Construction 2	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3531	Aquatic Chemistry	(3 UOC)
CVEN3725	Waste Management	(3 UOC)
CVEN3726	Environmental Policy	(3 UOC)
CVEN4323	Structural Engineering 4	(3 UOC)

And ONE of the following courses:

CVEN3023	Civil Engineering Practice 3A	(3 UOC)
CVEN3723	Environmental Engineering Practice 3A	(3 UOC)

And ONE of the following courses:

CVEN3024	Civil Engineering Practice 3B	(3 UOC)
CVEN3724	Environmental Engineering Practice 3B	(3 UOC)
Geography Elective		(6 UOC)
General Education		(6 UOC)

Year 5

Session One

Students achieving a School weighted average mark exceeding 62 (calculated from all courses in Years 1 to 4 of the BE program) are eligible to undertake an Honours thesis in Year 4 (CVEN4000 in S1 and CVEN4001 in S2).

CVEN4126	Engineering Management 2	(3 UOC)
CVEN4225	Geotechnical Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)
CVEN4533	Transport & Fate of Pollutants	(3 UOC)

Plus TWO of the following electives:

CVEN4000	Honours Thesis Part A	(6 UOC)
CVEN4027	Civil Engineering Practice 4A	(6 UOC)
CVEN4028	Civil Engineering Practice 4B	(6 UOC)
CVEN4029	Civil Engineering Practice 4C	(6 UOC)
CVEN4727	Environmental Engineering Practice 4A	(6 UOC)
CVEN4728	Environmental Engineering Practice 4B	(6 UOC)
CVEN4729	Environmental Engineering Practice 4C	(6 UOC)

Session Two

All students not undertaking the Honours thesis are required to select two majors. Students undertaking the Honours thesis are required to undertake one major plus at least 8 units of credit of electives taken from one other discipline area. To complete a major, all three 4 units of credit elective subjects (listed for each discipline below) must be undertaken.

CVEN4001	Honours Thesis Part B	(4 UOC)

Construction and Management Major

CVEN4139	Advanced Construction and Project Management	(4 UOC)
CVEN4149	Professional Level Project Management Tools and Skills	(4 UOC)
CVEN4159	Advanced Construction Technology and Engineering	(4 UOC)

Geotechnical Major

Any 3 of the following 4 courses:

CVEN4269	Environmental Geotechnics	(4 UOC)
CVEN4279	Rock and Slope Engineering	(4 UOC)
CVEN4289	Site Investigations and Dam Engineering	(4 UOC)
CVEN4299	Advanced Topics in Geotechnical Engineering	(4 UOC)

Structures Major

CVEN4349	Special Topics in Concrete, Steel and Composite Structures	(4 UOC)
CVEN4359	Structural Analysis and Finite Elements	(4 UOC)
CVEN4339	Design of Bridges	(4 UOC)

Transport Major

CVEN4439	Transport Operations and Systems Design	(4 UOC)
CVEN4449	Traffic Management and Control	(4 UOC)
CVEN4459	Transport and Environment	(4 UOC)

Water Major

Any 3 of the following 4 courses:

CVEN4539	Advanced Water Quality and Treatment	(4 UOC)
CVEN4549	Advanced Catchment and Coastal Processes	(4 UOC)
CVEN4559	Advanced Water Engineering	(4 UOC)
CVEN4569	Advanced Environmental Systems	(4 UOC)

Note each major strand is divided into at least three courses each of 4 units of credit. A major consists of undertaking 12 units of credit in a given strand. Students may also take elective components of 4 units of credit each offered from different strands.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours Thesis in their Final Year. A School weighted average mark is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1
General Education x 2
Year 2 x 2
Year 3 x 4
Year 4 x 5

Industrial training is assigned a nominal value of 3 units of credit in Year 4 in the Honours calculation. For combined degree programs only the marks obtained in the standard Civil and Environmental Engineering courses are used in the calculation. A weighted average mark in the range of 65.0-69.9 will result in a recommendation for Honours 2/2. A weighted average mark in the range of 70.0-74.9 will result in a recommendation for Honours 2/1. A weighted average mark of 75.0 and above will result in a recommendation for Honours 1.

Academic Rules

1. Students must satisfy the normal program and course prerequisites for Environmental Engineering and Civil Engineering.
2. The degrees of Bachelor of Engineering may be conferred as Pass or Honours degrees. There are two classes of Honours, Class 1, and Class 2, in two divisions. The award and grade of Honours are made in recognition of superior performance throughout the program with greater weighting on courses in the later years. The course can lead to the award of the University Medal in either Civil or Environmental Engineering.
3. There will be a testamur for each degree in the combined program.
4. Students must satisfy admission requirements for both the BE in Civil and Environmental Engineering for direct admission or may transfer from either the Civil or the Environmental BE program after completion of the first year with a weighted average mark of 65 or greater.
5. The total units of credit in the program is 240

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

Professional Recognition

Both the BE in Civil Engineering and the BE in Environmental Engineering are fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

3735 Environmental Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may seek to undertake a five-year full-time combined program leading to the award of the degree of Bachelor of Engineering in Environmental Engineering and Bachelor of Science (BE BSc). The School of Civil and Environmental Engineering administers the program.

With the combined degree program, students can add their choice of a Science, Mathematics or Computer Science program to the standard, professionally accredited Environmental Engineering program offered by the School of Civil and Environmental Engineering.

The School of Civil and Environmental Engineering is the academic unit responsible for the program. The School will consult with the Faculty of Science in approving the BSc component of the program.

Students must satisfy admission requirements for both the BE in Environmental Engineering and BSc programs or may transfer from the BE in Environmental Engineering program after completion of at least one year if they have a credit or higher average.

Course credits can accrue simultaneously for both component degrees where there is an overlap of courses from the Environmental Engineering program and the Science Program.

Program Objectives and Learning Outcomes

The broad objective of the School's undergraduate programs is to develop well-educated graduates with the basic skills, attributes and knowledge required to practise as professional engineers. The desired skills are those that enable graduates to be problem solvers; critical thinkers; life long

learners; good communicators; team players; independent investigators; effective managers; self-motivated; and economically, environmentally and socially aware.

Students will be able to combine this with the skills learnt from the Science portion of the combined degree.

Program Structure

CVENB13735 and Science Plan

Year 1

All the year 1 courses in the Environmental Engineering course

Year 2

The year 2 courses in the Environmental Engineering program, except that 12 units of credit of Science courses are substituted for CVEN2222, CVEN2722 and General Education.

Year 3

Science courses to total at least 36 units of credit and CVEN2222, CVEN2722, CVEN3025, CVEN3126

Year 4

Science courses to total at least 24 units of credit and BIOS3301, CEIC0050, CVEN3222, CVEN3223, CVEN3526, CVEN 3527, CVEN3531 and CVEN 3726

Year 5

Science courses to total at least 12 units of credit in S2 in lieu of one environmental engineering major (12 units of credit) and CVEN3438 and CVEN3725 in lieu of one of CVEN4727, CVEN4728 or CVEN4729 in S1. Otherwise the Standard Year 4 program in Environmental Engineering.

The degrees of Bachelor of Engineering and Bachelor of Science may be conferred as a Pass degree or as an Honours degree. There are two classes of Honours, Class 1 and Class 2 in two divisions. The award and grade of Honours in the BE are made in recognition of superior performance throughout the program with a greater weighting on courses in the later years. The BSc can be awarded Honours on the successful completion of an Honours year. It should be noted that entry into a particular Honours program might require completion of additional courses.

Academic Rules

1. The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Engineering and Bachelor of Science (BE BSc).
2. The five years of the program include at least 108 units of credit in the Science program and a minimum of 240 units of credit in total.
3. The 108 Science program units of credit must include a minimum of 36 and a maximum of 48 level 1 units of credit and all courses prescribed in a specific program as outlined in the Science section in this Handbook must be completed.
4. Students must satisfy the normal prerequisites for entry to Bachelor of Science Program and to individual courses therein. Also, students must satisfy the normal prerequisites for entry to Environmental Engineering and to individual courses therein.
5. Students desiring to enrol in the BSc degree program at Honours level are not able to complete the program in five years and must obtain approval from the School of Civil and Environmental Engineering and the Faculty of Science for their programs. With the approval of the relevant school and of the Head of the School of Civil and Environmental Engineering, a student may follow a standard Honours program in the Science program which can be completed by an additional year of study.
6. The degrees of Bachelors of Engineering and Bachelor of Science are not awarded until the completion of the full five-year program.
7. Students contemplating enrolling in this program should consult fully with the Faculty of Science and with the School of Civil and Environmental Engineering before enrolment.
8. There will be a testamur for each degree in the combined program.
9. Students must complete the full requirements of the BE in Environmental Engineering (code 3625) except that:
 - a) CVEN3723 and CVEN3724 are exempted;
 - b) the General Education requirement is exempted;
 - c) a final year engineering major (12 units of credit) is exempted; and
 - d) final year engineering electives are to be selected from the Geotechnical, Transport, Water and Chemical Engineering majors.
10. Group A and Group B courses below will count towards satisfying requirements of both rules 2 and 9 above. The courses in Group B may not satisfy requirements for progression within science programs.

11. Students may apply for exemption from the requirements of Rule 9 for the courses listed in Rule 12 below Group B on the basis of courses/requirements in parentheses.

12. Exemptions will be granted for the courses in Group C below with respect to Rule 9 on the basis of the requirements within parentheses.

Group A

CHEM1011, CHEM1031, MATH1131 or MATH1141, MATH1231 or MATH1241, BIOS1101

Group B

CVEN1531 (CHEM1021), MATH2019 (at least 12 units of credit of non-statistics level II mathematics), CVEN2025 (at least 3 units of credit of level II Statistics), GEOS1711 (GEOS1721), BIOS3301 (BIOS3111).

Group C

CVEN3025 (at least 3 units of credit of level III applied mathematics).

13. Students wishing to major in Physics must consult with the School of Physics and the School of Civil & Environmental Engineering in regards to choice of courses.

14. A typical structure of a combined Engineering/Science program is set out above in the Program Structure section. Subject to timetable restrictions, the full range of Science programs is available to Environmental Engineering students.

15. The total units of credit in the program is 240.

Industrial Experience

Industrial experience is an integral part of the program. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study. Students who have had suitable experience in industry prior to commencement may qualify for exemption from completing further industrial training.

Further Requirements

The School of Civil and Environmental Engineering is the academic unit responsible for the program. The School will consult with the Faculty of Science in approving the BSc component of the program.

Students must satisfy admission requirements for both the BE in Environmental Engineering and BSc programs or may transfer from the BE in Environmental Engineering program after completion of at least one year if they have a credit or higher average.

Course credits can accrue simultaneously for both component degrees where there is an overlap of courses from the Environmental Engineering program and Science and Mathematics programs.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

Professional Recognition

The BE in Environmental Engineering is fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

3626 Environmental Engineering/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BArts

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program, students can add their choice of an Arts program to the standard, professionally accredited Environmental Engineering (3625) program offered by the School of Civil and Environmental Engineering. It provides flexibility in the choice

of courses within the full Arts program and enables students to gain a broad education in Arts and Social Sciences, as well as specialised studies in Environmental Engineering.

Because Engineering and Arts programs can have a common content, such as mathematics and physics, two additional sessions of study is required to gain the additional qualification of Bachelor of Arts. In general, this additional study is taken concurrently with the BE program and both can be completed in ten sessions.

Eligibility

The program is open to all students who satisfy both the Environmental Engineering (3625) and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program after completion of at least one year if they have a credit or higher average. Transfer after the second year may result in students taking more than minimum time to complete the combined program.

The BE BA program is administered by the School of Civil and Environmental Engineering. The School will consult with the Faculty of Arts and Social Sciences in approving the BA component of the program. The final program and timetable must be approved by the School of Civil and Environmental Engineering.

Students should start discussing their program with representatives of the School and the Faculty of Arts and Social Sciences as early as possible. Students should themselves determine the Arts program that they wish to undertake. The Arts and Social Sciences section in this Handbook describes the options. There are no special rules on what courses should be included in each year. Students should schedule the Arts and Engineering components to suit their preferences, while meeting the constraints of timetables and prerequisites.

Students will need to refer to the Faculty of Arts and Social Sciences section in this Handbook.

Program Structure

CVENB13626 and Arts Plan

Please contact the School of Civil and Environmental Engineering and the Faculty of Arts for the Program Structure of this combined degree.

Honours

Honours is awarded to students who have achieved above average results and who undertake an Honours Thesis in their Final Year. A School weighted average is calculated for each student. A different weighting factor for each year of the program is applied to the marks in each course by units of credit as follows:

Year 1 x 1

Year 2 x 2

Year 3 x 4

Year 4 x 5

Academic Rules

1. Students must complete 60 units of credit in the BA program, with no more than 24 units of credit obtained at Level 1 (ie in courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one school or department.

2. Students must complete a major sequence (42 units of credit) in one of the following areas :

Australian Studies

Chinese Studies

Development Studies

Education

English

European Studies

Film

French

German Studies

Greek

History

History and Philosophy of Science

Indonesian Studies

Japanese Studies

Korean Studies

Linguistics

Media, Culture & Technology

Music

Philosophy

Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology and Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

3. Except for courses completed as part of the major sequence, no more than 12 units of credit may be obtained from courses in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE program can be included in the 60 units of credit required at Rule 1 for the BA program

5. Students must complete the full requirements of Program 3625 in Environmental Engineering except that they are exempt from the General Education requirements of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA program have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of Honours year. It should be noted that entry into a particular BA Honours program might require completion of courses additional to those specified under Rules 1-4.

8. The total units of credit in the program is 240.

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under Faculty Information and Assistance in this Handbook.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete at least sixty days of approved industrial experience. Students are strongly recommended to gain as much industrial experience as possible during the session breaks throughout their period of study.

Professional Recognition

Both the BE in Civil Engineering and the BE in Environmental Engineering are fully accredited by the Institution of Engineers, Australia, meeting the examination requirements for admission to graduate and corporate membership of the Institution. Substantial or complete recognition is accorded to the BE programs by overseas engineering institutions.

Computing Requirements

For information about computing requirements, please refer to the School website: www.civeng.unsw.edu.au/currentstudents/general/computing

3715 Environmental Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

4777 Environmental Engineering/Bachelor of Laws

Bachelor of Engineering Bachelor of Laws BE LLB CVENB14777 and Laws Plan

This program provides students with professional qualifications in areas of very great importance to the community. The program is attractive to students who have in mind a career involving environmental issues, engineering and the law. Most large developments raise a formidable range of legal issues, and there is a need for highly qualified personnel who are able to understand both the engineering and the legal dimensions of development, both in Australia and overseas.

The Faculty of Law administers this program. For full details, see entry under the Faculty of Law in this Handbook.

Fast-Track Programs with Master of Engineering Science

3620 Civil Engineering/Master of Engineering Science – Plan CVENG13620

Bachelor of Engineering Master of Engineering Science BE MEngSc

3625 Environmental Engineering/Master of Engineering Science – Plan CVENH13625

Bachelor of Engineering Master of Engineering Science BE MEngSc

Students may undertake a 4.5 year full-time fast-track program leading to the awards of either Bachelor of Engineering in Civil Engineering or Environmental Engineering and Master of Engineering Science.

Program of Study

Students undertake the first three years of the standard BE program in either Civil or Environmental Engineering. Subject to satisfying a minimum performance over these three years they (a) complete standard S1 program of Year 4 without Honours thesis (b) substitute 12 units of credit of the standard Year 4 BE degree program with a School approved 12 units of credit of graduate coursework in their Year 4; (c) undertake a 12 units of credit of project/thesis work over the Summer (9th) Semester; and (d) undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year) in the following areas:

Environmental Engineering, Project Management, Technology Management, Geotechnical Engineering, Transport Engineering, Coastal Engineering and Management, Groundwater Studies, Hydrology and Water Resources, Waste Management, Water Quality Management, and Water and Wastewater Treatment.

It may not be possible to complete a specialisation in all sub disciplines in this fast-track mode.

School of Computer Science and Engineering

Head of School: Professor PJ Compton

Associate Head of School: Associate Professor WH Wilson

Student Office Manager: Miss CJ Nock

Undergraduate Program Directors: Dr A Mahidadia (Computer Engineering)

Associate Professor S Parameswaran (Computer Engineering)

Associate Professor K Robinson (Software Engineering)

Associate Professor A Hoffmann (Computer Science)

Dr TD Lambert (Computer Science & Computer Science Honours)

Dr B Gaeta (Bioinformatics)

The School of Computer Science and Engineering and the School of Electrical Engineering and Telecommunications have joint responsibility for the curriculum of the Computer Engineering program.

The staff of the School of Computer Science and Engineering is grouped into research groups of Architecture, Artificial Intelligence, Computer Networks, Computer Systems, Database and Software Engineering. Courses in these areas are offered to students taking major studies in Computer Science or Computer Engineering, while introductory-level computing courses are available more generally to students studying Science, Arts or Engineering. Computer Science has links with discrete mathematics, which furnishes the theory behind the algorithms that computer software implements, and electrical engineering, which supplies the present technology underlying physical computing devices.

The School of Computer Science and Engineering, together with the School of Electrical Engineering and Telecommunications, jointly administers the BE Computer Engineering 3645. The BE Software Engineering 3648 is jointly managed with the School of Information Systems. The BE MBiomedE programs 3728, 3749, and 3757 are managed in conjunction with the Graduate School of Biomedical Engineering. The Bachelor of Engineering Bioinformatics 3647 is offered in collaboration with the Faculty of Science.

The School of Computer Science and Engineering also offers the program Bachelor of Science Computer Science 3978. Computer Science is offered as a major in the combined BE BSc programs, BSc BA, BSc BSc, BSc LLB and more recently, BSc BDigMed. It is offered as a minor in the program, BSc (Science and Mathematics) 3970. The School also offers a major sequence in computing within the BA 3400 and BSocSc 3420.

Summary of Undergraduate Programs

Normal full-time

Bachelor of Engineering

Duration

3645	BE in Computer Engineering	4 years
3647	BE in Bioinformatics	4 years
3648	BE in Software Engineering	4 years
3651	BE BSc in Software Engineering	5 years
3652	BE BA in Software Engineering	5 years
3653	BE BCom in Software Engineering	5 years
3722	BE BA in Computer Engineering	5 years
3726	BE BSc in Computer Engineering	5 years
3715	BE BCom in Computer Engineering	5.5 years
3728	BE MBiomedE in Computer Engineering	5 years
3749	BE MBiomedE in Software Engineering	5 years
3755	BE BSc in Bioinformatics	5 years
3756	BE BA in Bioinformatics	5 years
3715	BE BCom in Bioinformatics	5.5 years
3757	BE MBiomedE in Bioinformatics	5 years

Bachelor of Science

Duration

3978	BSc in Computer Science	3 years (Pass)
3978	BSc in Computer Science	4 years (Hons)

Combined BE BSc in Computer Science

Duration

3042	BE BSc in Chemical Engineering	5 years
3102	BE BSc in Industrial Chemistry	5 years
3641	BE BSc in Telecommunications	5 years
3711	BE BSc in Aerospace Engineering	5 years
3711	BE BSc in Manufacturing Management	5 years
3711	BE BSc in Mechanical Engineering	5 years
3711	BE BSc in Mechatronic Engineering	5 years
3711	BE BSc in Naval Architecture	5 years
3725	BE BSc in Electrical Engineering	5 years
3730	BE BSc in Civil Engineering	5 years
3735	BE BSc in Environmental Engineering	5 years
3746	BE BSc in Surveying and Spatial Information Systems	5 years

Combined BSc BDigMed

Duration

3982	BSc Computer Science Bachelor of Digital Media	4 years (Pass)

Combined BSc BSc

Duration

3983	BSc BSc in Computer Science	4 years (Pass)

Combined BSc with Other Degrees

Duration

3529	BCom BSc Commerce/Science	4 years (Pass)
3935	BSc BSoc Sc Science/Social Science	4 years (Pass)
3968	BSc BA Science/Arts	4 years (Pass)
4770	BSc LLB Science/Law	5 years

For a description of the combined BE BSc programs, see the entries in this Handbook for the Schools conducting the Engineering major. Majors in the program 3978 are also offered in Computer Science and Psychology, Computer Science and Geography, and Computer Science and Philosophy. For the BA degree program, see the Arts and Social Sciences section in this Handbook and for the BSc LLB program, see the Law section in this Handbook. For the BSc BA and BSc BSoc, see the Science entry in this Handbook. For the BSc BCom, see the Commerce entry in this Handbook.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

General Education Courses

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3645 Computer Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Computer Science and Engineering and the School of Electrical Engineering and Telecommunications have joint responsibility for the curriculum of the Computer Engineering program.

The staff of the School of Computer Science and Engineering is grouped into research groups of Architecture, Artificial Intelligence, Computer Systems, Database and Software Engineering. Courses in these areas are offered to students taking major studies in Computer Science or Computer Engineering, while introductory-level computing courses are available more generally to students studying Science, Arts or Engineering. Computer Science has links with discrete mathematics, which furnishes the theory behind the algorithms that computer software implements, and electrical engineering, which supplies the present technology underlying physical computing devices.

Program Structure

Plan COMPB13645

Year 1

ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

ACCT9003	Introduction to Accounting Principles	(3 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

And ONE of the following courses:

MATH2510	Real Analysis	(3 UOC)
MATH2610	Higher Real Analysis	(3 UOC)

And ONE of the following courses:

MATH2520	Complex Analysis	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)

Plus General Education

(6 UOC)

Year 3

COMP3211	Computer Architecture	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
ELEC3006	Electronics A	(6 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)

And ONE of the following courses:

COMP3231	Operating Systems	(6 UOC)
COMP3891	Extended Operating Systems	(6 UOC)

And ONE of the following courses:

COMP3120	Introduction to Algorithms	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
Plus 2 Electives		(12 UOC)
Plus General Education		(3 UOC)

Year 4

COMP4910	Thesis Part A	(3 UOC)
COMP4911	Thesis Part B	(15 UOC)
COMP4920	Professional Issues and Ethics	(3 UOC)
Plus 4 Electives		(24 UOC)
Plus General Education		(3 UOC)

Elective Courses

1. The Program Director must approve the program selected by each student. Not all electives are offered in each session. Students are advised each year of the timetable of available electives. It may be possible to substitute other electives run by the participating schools, apart from those listed below, but this is not permitted if it unduly restricts the range of courses studied overall.

2. Electives for Stages 3 and 4 total 36 units of credit (6 courses of 6 units of credit, or equivalent) and are selected from Groups N, S, CE3, CE4, and D (see below), with these restrictions:

- i) At least 6 units of credit must be taken from Group N
- ii) At least 12 units of credit must be taken from Group CE4.
- iii) At most 12 units of credit may be counted from Group S.

Group N Networks Electives

And ONE of the following courses:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)
TELE3018	Data Networks 1	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)

Group S Science Electives

MATH2301	Mathematical Computing	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)
PHYS2010	Mechanics	(3 UOC)
PHYS2020	Computational Physics	(3 UOC)
PHYS2040	Quantum Physics	(3 UOC)

Group CE3 Level-3 Computer Engineering Electives

COMP3141	Software System Design and Implementation	(6 UOC)
ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
ELEC3016	Electronics B	(6 UOC)
TELE9301	Switching System Design	(6 UOC)
TELE9303	Network Management	(6 UOC)
COMP3131	Programming Languages and Compilers	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3161	Concepts of Programming Languages	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3421	Computer Graphics	(6 UOC)
COMP3431	Robotic Software Architecture	(6 UOC)
COMP3441	Cryptography and Security	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)

Group CE4 Level-4 Computer Engineering Electives

COMP4001	Object-Oriented Software Development	(6 UOC)
COMP4003	Industrial Software Development	(6 UOC)
COMP4132	Advanced Functional Programming	(6 UOC)
COMP4133	Advanced Compiler Construction	(6 UOC)
COMP4151	Algorithm Verification	(6 UOC)
COMP4211	Advanced Architectures and Algorithms	(6 UOC)
COMP4411	Experimental Robotics	(6 UOC)
COMP4412	Introduction to Modal Logic	(6 UOC)

COMP4415	First-order Logic	(6 UOC)
COMP4416	Intelligent Agents	(6 UOC)
COMP4418	Knowledge Representation	(6 UOC)
COMP4511	User Interface Design and Construction	(6 UOC)
COMP9116	Software System Development Using the B-Method and B-Toolkit	(6 UOC)
COMP9117	Software Architecture	(6 UOC)
COMP9242	Advanced Operating Systems	(6 UOC)
COMP9243	Distributed Systems	(6 UOC)
COMP9314	Next Generation Database Systems	(6 UOC)
COMP9315	Database Systems Implementation	(6 UOC)
COMP9318	Data Warehousing & Data Mining	(6 UOC)
COMP9321	E-Commerce Systems Implementation Infrastructure	(6 UOC)
COMP9332	Network Routing and Switching	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9334	Systems Capacity Planning	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
COMP9515	Pattern Recognition	(6 UOC)
COMP9517	Computer Vision	(6 UOC)
COMP9519	Multimedia Authoring	(6 UOC)
COMP9790	Principles of Global Navigation Satellite System (GNSS) Positioning	(6 UOC)
COMP9791	Modern Navigation & Positioning Technologies	(6 UOC)
ELEC4042	Signal Processing 2	(6 UOC)
ELEC4205	Electrical Energy Systems	(6 UOC)
ELEC4216	Electrical Drive Systems	(6 UOC)
ELEC4240	Power Electronics	(6 UOC)
ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)
ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)
ELEC9344	Speech & Audio Processing	(6 UOC)
ELEC9370	Digital Image Processing Systems	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)
TELE4313	Optical Communications	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)
TELE9337	Advanced Networking	(6 UOC)
And ONE of the following courses:		
COMP9231	Integrated Digital Systems	(6 UOC)
ELEC4532	Integrated Digital Systems	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies. For further information, please refer to General Education section in this Handbook.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI >97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Professional Recognition

The Institution of Engineers, Australia

The professional body for engineering in Australia is the Institution of Engineers, Australia (IEAust), which has as its first objective the promotion of the science and practice of engineering in all its branches.

The IEAust has its national headquarters in Canberra and functions through a series of divisions, the local one being the Sydney Division. Within each division are branches representing the main interests within the profession, e.g. civil, mechanical, electrical, engineering management and environmental engineering.

Students of an approved school of engineering may join the Institution as a student member (StudIEAust). Student members receive the monthly publication Engineers Australia and for a small fee they also receive The Transactions which contains articles on a particular branch of engineering.

Student members are invited to participate in the Excellence Award for Work Experience, the National Young Engineer of the Year Award and to avail themselves of other IEAust services including the Mentor Scheme and industrial experience guidance.

For more information and membership application forms, contact The Institution of Engineers, Australia, Sydney Division, 1st Floor, 118 Alfred Street, Milsons Point 2061, telephone 8923 7100, website www.ieaust.org.au

3647 Bioinformatics

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Computer Science and Engineering and the Faculty of Science jointly administer the Bioinformatics program. Day-to-day administration is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

The stages of the program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements. Approval should be obtained for changes.

The School also offers the combined degrees BE (Bioinformatics)/BA (program 3756), BE (Bioinformatics)/BSc (program 3755), the concurrent degree BE (Bioinformatics)/MBiomedE (program 3757), and also the fast-track program BE/MEngSc (plan BINFL13647).

Program Structure

Plan COMPB13647

Year 1

BINF1001	Bioinformatics 1	(6 UOC)
BIOS1201	Molecules, Cells and Genes	(6 UOC)

And ONE of the following courses:

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

BINF2001	Bioinformatics 2	(6 UOC)
BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
LIFE2101	Introductory Biochemistry & Microbiology	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

And ONE of the following courses:

BIOS2021	Genetics	(6 UOC)
BIOS2621	Genetics (Advanced Level)	(6 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

And ONE of the following courses:

MATH2801	Theory of Statistics	(6 UOC)
MATH2901	Higher Theory of Statistics	(6 UOC)

Year 3

BINF3001	Bioinformatics 3	(6 UOC)
BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3711	Software Project Management	(6 UOC)

And one of the following courses:

COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3821	Extended Algorithms and Programming Techniques	(6 UOC)

3 Electives (2 Year 3 electives in S1 and 1 Year 3 elective in S2. At least one from Life Science and one from COMP/MATH) (18 UOC)

General Education (3 UOC)

Year 4

BINF4910	Thesis Part A	(3 UOC)
BINF4911	Thesis Part B	(12 UOC)
BINF4920	Professional Issues and Ethics for Bioinformatics	(3 UOC)

3 electives (at least one from Life Science and one from COMP/MATH) (18 UOC)

General Education (9 UOC)

Electives for Stages 3 and 4 total 42 units of credit and are selected from the lists below:

Year 3 Electives

BIOC3111	Molecular Biology of Proteins	(6 UOC)
BIOC3151	Human Genetics and Variation	(6 UOC)
BIOC3281	Recombinant DNA Techniques	(6 UOC)
BIOC3291	Genes, Genomes & Evolution	(6 UOC)
BIOT3011	Biotechnology A	(6 UOC)
BIOT3061	Biopharmaceuticals	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3431	Robotic Software Architecture	(6 UOC)

And ONE of the following courses:

COMP3231	Operating Systems	(6 UOC)
COMP3891	Extended Operating Systems	(6 UOC)

And ONE of the following courses:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)

And ONE of the following courses:

MATH2831	Linear Models	(6 UOC)
MATH2931	Higher Linear Models	(6 UOC)

Year 4 Electives

BIOT3071	Commercial Biotechnology	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)
COMP4511	User Interface Design and Construction	(6 UOC)
COMP9243	Distributed Systems	(6 UOC)
COMP9314	Next Generation Database Systems	(6 UOC)
COMP9318	Data Warehousing & Data Mining	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
MATH3821	Statistical Modelling and Computing	(6 UOC)
MICR3011	Microbial Physiology	(6 UOC)
MICR3021	Microbial Genetics	(6 UOC)

And ONE of the following courses:

MATH3801	Probability and Stochastic Processes	(6 UOC)
MATH3901	Higher Probability and Stochastic Processes	(6 UOC)

And ONE of the following courses:

MATH3811	Statistical Inference	(6 UOC)
MATH3911	Higher Statistical Inference	(6 UOC)

Other level 3 MATH electives may also be considered.

Other level 3/4/9 COMP courses not listed are permitted.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies. For further information, please refer to the General Education section in this Handbook.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Information and Requirements

1. A HSC Maths mark of 145-150 is required in Maths extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI >97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional Recognition

The Institution of Engineers, Australia

The professional body for engineering in Australia is the Institution of Engineers, Australia (IEAust), which has as its first objective the promotion of the science and practice of engineering in all its branches.

The IEAust has its national headquarters in Canberra and functions through a series of divisions, the local one being the Sydney Division. Within each division are branches representing the main interests within the profession, e.g. civil, mechanical, electrical, engineering management and environmental engineering.

Students of an approved school of engineering may join the Institution as a student member (StudIEAust). Student members receive the monthly publication Engineers Australia and for a small fee they also receive the transactions that contains articles on a particular branch of engineering.

Student members are invited to participate in the Excellence Award for Work Experience, the National Young Engineer of the Year Award and to avail themselves of other IEAust services including the Mentor Scheme and industrial experience guidance.

For more information and membership application forms, contact The Institution of Engineers, Australia, Sydney Division, 1st Floor, 118 Alfred Street, Milsons Point 2061, telephone 8923 7100, website www.ieaust.org.au

3648 Software Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Computer Science and Engineering and the School of Information Systems, Technology and Management jointly administer the Software Engineering Program. Day-to-day administration is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

The stages of the program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements. Approval should be obtained for changes.

The School also offers the combined degrees BE (Software Eng)/BSc (program 3651), BE (Software Eng)/BA (program 3652), BE (Software Eng)/BCom (program 3715), the concurrent degree BE (Software Eng)/MBiomedE (program 3749) and also the fast track program BE (Software Eng)/MEngSc (plan SENGL13648).

Program Structure

Plan SENGAI3648

Year 1

INFS1603	Business Data Management	(6 UOC)
INFS1611	Requirements Engineering	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
SENG1031	Software Engineering Workshop 1	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

Year 1 - Free Electives (6 UOC)

Year 2

COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2111	System Modelling and Design	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SENG2010	Software Engineering Workshop 2A	(3 UOC)
SENG2020	Software Engineering Workshop 2B	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)
General Education		(6 UOC)
Year 2 - Free Electives		(6 UOC)

Year 3

COMP3141	Software System Design and Implementation	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
SENG3010	Software Engineering Workshop 3A	(3 UOC)
SENG3020	Software Engineering Workshop 3B	(3 UOC)
SE Electives		(24 UOC)
General Education		(6 UOC)

Year 4

SENG4910	Thesis Part A	(6 UOC)
SENG4911	Thesis Part B	(12 UOC)
SENG4921	Professional Issues and Ethics	(6 UOC)
SE Electives		(24 UOC)

Electives

The 8 options (48 units) for stages 3 and 4 are chosen from a list that includes all third and fourth stage COMP, INFS courses and some MATH courses. See SE electives. Electives and more information can be found on the School's website at www.seng/se-electives/

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies. For further information, please refer to the General Education section in this Handbook.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at a sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training Requirements

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional Recognition**The Institution of Engineers, Australia**

The professional body for engineering in Australia is the Institution of Engineers, Australia (IEAust), which has as its first objective the promotion of the science and practice of engineering in all its branches.

The IEAust has its national headquarters in Canberra and functions through a series of divisions, the local one being the Sydney Division. Within each division are branches representing the main interests within the profession, e.g. civil, mechanical, electrical, engineering management and environmental engineering.

Students of an approved school of engineering may join the Institution as a student member (StudIEAust). Student members receive the monthly publication *Engineers Australia* and for a small fee they also receive the transactions that contains articles on a particular branch of engineering.

Student members are invited to participate in the Excellence Award for Work Experience, the National Young Engineer of the Year Award and to avail themselves of other IEAust services including the Mentor Scheme and industrial experience guidance.

For more information and membership application forms, contact The Institution of Engineers, Australia, Sydney Division, 1st Floor, 118 Alfred Street, Milsons Point 2061, telephone 8923 7100, website www.ieaust.org.au

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI >97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

3978 Computer Science**Bachelor of Science BSc****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

Entry to this program is restricted to students who have been offered a place directly via UAC (UAC code 425019).

Computer Science involves the study of the design, construction and uses of computer systems. It is concerned with the representation of data and data structures in computer systems and the design of algorithms for automatic manipulation of this information by programming languages and machine systems. It is very much concerned with the design and development of hardware and software tools by which computer applications may be developed, but not so much with the applications themselves. It is, however, noted that non-computing elements (such as human interface or psychological aspects) can often dictate the level of success of computing systems. At UNSW, particular emphasis is given to comprehension of the basic principles behind computing tools, operating systems, compilers and translators, and computer hardware.

Students in other programs may take some Level 1 and Level 2 Computer Science courses. Level 3 studies in Computer Science are only available in other specified combined programs. Appropriate disciplines are Physics and Computing, Mathematics and Computer Science.

Minors - that is, recognised sequences of related courses in disciplines other than Computer Science - are available in the Computer Science program. For details, see the Science program 3970 entry in this Handbook.

Program Structure**Plan COMPA13978****Year 1**

MATH1081	Discrete Mathematics	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Plus Electives (18 UOC)

Computer Science has mathematics and computing courses in year 1, representing five out of eight courses for a full-time student. Electives are chosen from areas such as Physics, Information Systems, Chemistry, Philosophy, Psychology, Geography, and Economics.

Year 2

COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
COMP2920	Professional Issues and Ethics	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Electives (21 UOC)
General Education (6 UOC)

Four of the ten courses in Year 2 comprise core computing. The remainders are electives. Common electives include mathematics (many choices), psychology, geography, biology, chemistry, physics, economics, arts, more first year courses (maximum 12 UOC), material that follows on from first-year electives and information systems.

Year 3

COMP3111	Software Engineering	(6 UOC)
Level 3/4 Computer Science Electives		(24 UOC)
General Education		
Electives		(12 UOC)

Between five and seven computing courses (selected from available Level 3 and 4 courses) are taken in Year 3. Students proceeding to the Honours year must take at least six Level 3 courses in computing or other disciplines.

Level 3 Computing Electives

COMP3131	Programming Languages and Compilers	(6 UOC)
COMP3141	Software System Design and Implementation	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3161	Concepts of Programming Languages	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3421	Computer Graphics	(6 UOC)
COMP3431	Robotic Software Architecture	(6 UOC)
COMP3441	Cryptography and Security	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)

One of the following:

COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3821	Extended Algorithms and Programming Techniques	(6 UOC)

One of the following:

COMP3231	Operating Systems	(6 UOC)
COMP3891	Extended Operating Systems	(6 UOC)

One of the following:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)

Level 4 Computing Electives

COMP4001	Object-Oriented Software Development	(6 UOC)
COMP4003	Industrial Software Development	(6 UOC)
COMP4133	Advanced Compiler Construction	(6 UOC)
COMP4151	Algorithm Verification	(6 UOC)
COMP4418	Knowledge Representation	(6 UOC)
COMP4511	User Interface Design and Construction	(6 UOC)
COMP9314	Next Generation Database Systems	(6 UOC)
COMP9231	Integrated Digital Systems	(6 UOC)
COMP9243	Distributed Systems	(6 UOC)
COMP9318	Data Warehousing & Data Mining	(6 UOC)

COMP9321	E-Commerce Systems Implementation Infrastructure	(6 UOC)
COMP9332	Network Routing and Switching	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9334	Systems Capacity Planning	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
COMP9515	Pattern Recognition	(6 UOC)
COMP9517	Computer Vision	(6 UOC)
COMP9519	Multimedia Authoring	(6 UOC)
COMP9790	Principles of Global Navigation Satellite System (GNSS) Positioning	(6 UOC)
COMP9791	Modern Navigation & Positioning Technologies	(6 UOC)

With the approval of the Program Director or nominee, students in this program wishing to fulfil the requirements for a major in a second discipline, as well as the Computer Science requirements, may substitute a course from the other discipline for one of the Level 3/4 Computer Science courses. Students who have met the required prerequisites may also select electives from comp COMP4XXXX and COMP9XXX courses.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies. For further information, please refer to the General Education section in this Handbook.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Honours

Year 4 Honours (Optional) COMPAH3978

Computer Science Honours takes one year full-time or two years of part-time study.

Normally, students are expected to have attained an average mark of 65 (according to NewSouth Student calculations) to qualify for entry to the Honours year. Students who do not meet this expectation may be admitted in special circumstances. Students who have graduated with a three-year computer science degree from UNSW or another university can apply for admission to Honours. Application forms are available from the Student Office of Computer Science and Engineering in K17 G01. Detailed information about the program is available at the Honours website at: www.cse.unsw.edu.au/~cs4914

COMP4910	Thesis Part A	(3 UOC)
COMP4911	Thesis Part B	(15 UOC)

Computing Electives

Level 3/4 Computer Science Courses (12 UOC)
(subject to approval)

Level 4 Computer Science Courses (18 UOC)
(subject to approval of the Program Director)

Computer Science Honours students must at least complete 18UOC level 4 elective courses. Students may substitute level 4 courses from other schools with the permission of the Program Director.

Academic Rules

Please refer to Program Structure for the Academic Requirements relating to this program.

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI > 97 in order to do COMP1711.
2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.
3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.
4. Students may take COMP3111 Software Engineering in either semester.
5. Electives, COMP electives and General Education courses may be allocated between first and second semesters according to the student's preference, but the total units of credit per semester should be 24. COMP3111 is offered in both semesters.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science Engineering Student Office.

3726 Computer Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program students can add a science program to the standard, professionally accredited engineering program BE in Computer Engineering offered by the School of Computer Science & Engineering. All science majors within program 3970 are available.

Students who achieve a creditable performance, 65CR average after one or two years of their Computer Engineering program, may apply to transfer to the combined BE in Computer Engineering/BSc program.

There are no special rules on what to include in each year. Students should schedule the science and engineering components to suit their preferences while meeting the constraints of timetables and prerequisites. The Faculty of Science section in this Handbook describes the options and the School of Computer Science and Engineering Student Office can supply sample programs showing what previous students have arranged.

In addition to the BE program, students must complete a minimum of 60 units of credit in Science courses, including a major sequence in an approved area. The Science office must approve the Science component while the School of Computer Science & Engineering will approve the final program and schedule.

In the Faculty of Engineering, Honours are awarded for superior performance in the standard program. In the Faculty of Science, the award of Honours requires a separate program involving at least one further year of study.

Program Objectives and Learning Outcomes

Combined Degree Programs - Computer Engineering

Students in Computer Engineering who maintain a high average performance may qualify for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged. The degrees referred to here are the Bachelor of Engineering (Computer Engineering)/Bachelor of Arts BE BA and the Bachelor of Engineering (Computer Engineering)/Bachelor of Science BE BSc. Students wishing to gain a degree at Honours level in Arts or Science as part of their combined degree program shall meet all the relevant requirements of the Faculty concerned and of the appropriate schools.

Students wishing to enrol in, transfer into, or continue in a combined program shall have complied with all the requirements for prerequisite study, sequencing and academic attainment (a credit average, i.e. 65%) of both the program authorities concerned.

Students who commence a combined program, but subsequently do not wish to proceed with both areas of study, or who fail to maintain a credit average performance, should revert to a single degree program with appropriate credit for courses completed.

Students in a combined degree program are exempt from all General Education requirements. However, if the student reverts to the single degree program, the usual General Education requirements for that program apply.

There will be a testamur for each part of the combined degree program.

Students who complete the BE program first may proceed to graduation with the degree of Bachelor of Engineering in the usual way.

Program Structure

Plan COMPB13726

Please refer to the program entry for 3645 BE in Computer Engineering and contact the School of Computer Science and Engineering and the Faculty of Science for more information.

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI >97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional Recognition

The Institution of Engineers, Australia and the Australian Computer Society.

For more information, please refer to 'Professional Recognition' in the program entry for 3645 Computer Engineering.

3722 Computer Engineering/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Anyone who meets the entry requirements for both Computer Engineering and Arts is eligible for the combined program. Students may enter directly in first year or may apply to transfer from the normal Engineering program later, although with late transfer it might not be possible to complete the program in minimum time.

The BE in Computer Engineering BA combined program requires the completion of 240 UOC, including at least 60 UOC of Arts courses, and must contain a major sequence of 42 UOC at stages 2 and 3 in a single Arts discipline. Students in this combined program are exempt from the General Education requirement.

The major Arts discipline may not be Computer Science.

The Faculty of Arts and Social Sciences must approve the Arts component while the School of Computer Science & Engineering will approve the final program and schedule.

In the Faculty of Engineering, Honours are awarded for superior performance in the standard program. In the Faculty of Arts, the award of Honours requires a separate program involving at least one further year of study.

Program Objectives and Learning Outcomes

Combined Degree Programs - Computer Engineering

Students in Computer Engineering who maintain a high average performance may qualify for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged. The degrees referred to here are the Bachelor of Engineering (Computer Engineering)/Bachelor of Arts BE BA and the Bachelor of Engineering (Computer Engineering)/Bachelor of Science BE BSc. Students wishing to gain a degree at Honours level in Arts or Science as part of their combined degree program shall meet all the relevant requirements of the Faculty concerned and of the appropriate schools.

Students wishing to enrol in, transfer into, or continue in a combined program shall have complied with all the requirements for prerequisite study, sequencing and academic attainment (a credit average, i.e. 65%) of both the program authorities concerned.

Students who commence a combined program, but subsequently do not wish to proceed with both areas of study, or who fail to maintain a credit average performance, should revert to a single degree program with appropriate credit for courses completed.

Students in a combined degree program are exempt from all General Education requirements. However, if the student reverts to the single degree program, the usual General Education requirements for that program apply.

There will be a testamur for each part of the combined degree program.

Students who complete the BE program first may proceed to graduation with the degree of Bachelor of Engineering in the usual way.

Program Structure

Plan COMPB13722

Please refer to the program entry for 3645 BE in Computer Engineering and contact the School of Computer Science and Engineering and the Faculty of Arts and Social Sciences for more information.

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI > 97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional Recognition

The Institution of Engineers, Australia, and the Australian Computer Society.

For more information, please refer to 'Professional Recognition in the program entry for 3645 Computer Engineering.

3715 Computer Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

3728 Computer Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BE (Computer Engineering) /Master of Biomedical Engineering concurrent degree program is offered jointly through the School of Computer Science and Engineering and the Graduate School of Biomedical Engineering.

Program Structure

Plan COMPB13728

Year 1

BIOM1001	Professional Biomedical Studies	(3 UOC)
BIOM2010	Biomedical Engineering Practice	(3 UOC)
CHEM1817	Chemistry 1ME	(3 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

ACCT9003	Introduction to Accounting Principles	(3 UOC)
ANAT2511	Fundamentals of Anatomy	(6 UOC)
BIOM9420	Clinical Laboratory Science	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
ELEC1011	Electrical Engineering 1	(6 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

And ONE of the following courses:

MATH2510	Real Analysis	(3 UOC)
MATH2610	Higher Real Analysis	(3 UOC)

And ONE of the following courses:

MATH2520	Complex Analysis	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)

General Education (3 UOC)

Year 3

COMP3211	Computer Architecture	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)

COMP3711	Software Project Management	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

And ONE of the following courses:

COMP3231	Operating Systems	(6 UOC)
COMP3891	Extended Operating Systems	(6 UOC)

And ONE of the following courses:

COMP3120	Introduction to Algorithms	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
Biomedical Engineering elective		(6 UOC)
COMP Elective		(6 UOC)
General Education		(3 UOC)

Year 4

BIOM5920	Thesis A	(3 UOC)
BIOM9027	Medical Imaging	(6 UOC)
COMP4920	Professional Issues and Ethics	(3 UOC)
ELEC3006	Electronics A	(6 UOC)
PH2121	Principles of Physiology A	(6 UOC)
PHPH2221	Principles of Physiology B	(6 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
COMP electives		(12 UOC)

Year 5

BIOM5921	Thesis B	(15 UOC)
BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)

And ONE of the following options:

BIOM9913	Project Report	(12 UOC)

or

2 BIOM9xxx electives totalling 12 UOC

Plus BIOM9xxx electives totalling 12 UOC

Preferred Biomedical Engineering Electives

BIOM9440	Biomedical Practical Measures	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9613	Medical Instrumentation	(6 UOC)

Other Biomedical Engineering Electives

BIOM9012	Biomedical Statistics	(6 UOC)
BIOM9050	Microprocessors and Circuit Design for Biomedical Engineers	(6 UOC)
BIOM9060	Biomedical Systems Analysis	(6 UOC)
BIOM9311	Mass Transfer in Medicine	(6 UOC)
BIOM9321	Physiological Fluid Mechanics	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9430	Electromedical Standards	(6 UOC)
BIOM9432	Chemistry and Physics of Synthetic and Biological Polymers (Introductory Polymer Chemistry)	(6 UOC)
BIOM9510	Introductory Biomechanics	(6 UOC)
BIOM9541	Mechanics of the Human Body	(6 UOC)
BIOM9551	Biomechanics of Physical Rehabilitation	(6 UOC)
BIOM9561	Mechanical Properties of Biomaterials	(6 UOC)
BIOM9601	Biomedical Applications of Microcomputers 1	(6 UOC)
BIOM9621	Biological Signal Analysis	(6 UOC)
BIOM9701	Dynamics of the Cardiovascular System	(6 UOC)
SESC9451	Experimental Biomechanics	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths Extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI > 97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional recognition

The Institution of Engineers, Australia.

For more information, please refer to 'Professional Recognition in the program entry for 3645 Computer Engineering.

3755 Bioinformatics/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined Bachelor of Engineering in Bioinformatics/Bachelor of Science program allows students to study additional Science courses in their Bioinformatics program to gain a broader understanding of the various scientific disciplines that contribute to Bioinformatics (such as mathematics, statistics and chemistry) or constitute major application areas of bioinformatics (for example, medical sciences or biotechnology).

Students must meet the entry requirements for the BE (Bioinformatics) program and the Bachelor of Science program, and must complete the courses and electives required by the Bioinformatics program (3647) as well as 60 additional units of credit in Science courses, including an approved major sequence of 42 UOC at Stages 2 and 3. Combined programs are exempt from the General Education requirement. Approved majors are listed in Table A of the BSc program (3970).

The stages of a generic combined program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements and overall program requirements. The School of Computer Science and Engineering Student Office can supply examples of specific combined programs.

Program Structure

Plan BINFB13755

Year 1

BINF1001	Bioinformatics 1	(6 UOC)
BIOS1201	Molecules, Cells and Genes	(6 UOC)

And ONE of the following courses:

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
LIFE2101	Introductory Biochemistry & Microbiology	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

And ONE of the following courses:

BIOS2021	Genetics	(6 UOC)
BIOS2621	Genetics (Advanced Level)	(6 UOC)

And ONE of the following courses:

MATH2801	Theory of Statistics	(6 UOC)
MATH2901	Higher Theory of Statistics	(6 UOC)

Plus 2 Science majors level 1 or 2 (6 UOC S1 and 6 UOC S2)

Year 3

BINF2001	Bioinformatics 2	(6 UOC)
BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
COMP3311	Database Systems	(6 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Plus 2 Science majors level 2 (6 UOC S1 and 6 UOC S2)

Plus 1 Year 3 elective (6 UOC)

Plus 2 General Education Courses (6 UOC)

Year 4

BINF3001	Bioinformatics 3	(6 UOC)
BINF4920	Professional Issues and Ethics for Bioinformatics	(3 UOC)
COMP3711	Software Project Management	(6 UOC)

And one of the following courses:

COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3821	Extended Algorithms and Programming Techniques	(6 UOC)

Plus 4 level 3 Science majors (24 UOC)

Plus 1 Year 3 elective (6 UOC)

Overall electives in Stages 3 and 4 must include at least one computer science and one life science elective.

Year 5

BINF4910	Thesis Part A	(3 UOC)
BINF4911	Thesis Part B	(12 UOC)
Plus 2 Level 3 Science majors		(12 UOC)
Plus 3 Year's 3/4/5 electives		(18 UOC)

Year 3 and 4 Electives

BIOC3111	Molecular Biology of Proteins	(6 UOC)
BIOC3151	Human Genetics and Variation	(6 UOC)
BIOC3281	Recombinant DNA Techniques	(6 UOC)
BIOC3291	Genes, Genomes & Evolution	(6 UOC)
BIOT3011	Biotechnology A	(6 UOC)
BIOT3061	Biopharmaceuticals	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
MICR3021	Microbial Genetics	(6 UOC)

One of the following:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)

Year 5 Electives

BIOT3071	Commercial Biotechnology	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)
COMP9314	Next Generation Database Systems	(6 UOC)
COMP9318	Data Warehousing & Data Mining	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
MATH3821	Statistical Modelling and Computing	(6 UOC)
MICR3011	Microbial Physiology	(6 UOC)

Level 3 MATH electives and other COMP3/4/9 electives may also be considered. Electives must include at least one life science and at least one COMP course.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually taken in second and third year studies. For further information, please refer to the General Education section in this Handbook.

It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below. The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI > 97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Career Information

The Institution of Engineers, Australia

For more information, please refer to 'Professional Recognition' in the program entry for 3647 Bioinformatics.

3756 Bioinformatics/Bachelor of Arts**Bachelor of Engineering Bachelor of Arts BE BA****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students qualify for the award of the two degrees of Bachelor of Engineering (Bioinformatics) and Bachelor of Arts. This cross-disciplinary program allows students to add their choice of Arts major to the standard Bioinformatics program and obtain the broader education offered by Arts and Social Sciences.

Students must meet the entry requirements for the BE (Bioinformatics) program and the Bachelor of Arts program, and must complete the courses and electives required by the Bioinformatics program (3647) as well as 60 additional units of credit in arts courses, including an approved major sequence of 42UOC at stages 2 and 3. Approved majors are given in List A of the Bachelor of Arts (3400) program. Combined programs are exempt from the General Education requirement.

The stages of a generic combined program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements and overall program requirements. The School of Computer Science and Engineering Student Office can supply examples of specific programs.

Program Structure

Plan BINF13756

Year 1

BINF1001	Bioinformatics 1	(6 UOC)
BIOS1201	Molecules, Cells and Genes	(6 UOC)

And ONE of the following courses:

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
LIFE2101	Introductory Biochemistry & Microbiology	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

And ONE of the following courses:

BIOS2021	Genetics	(6 UOC)
BIOS2621	Genetics (Advanced Level)	(6 UOC)

And ONE of the following courses:

MATH2801	Theory of Statistics	(6 UOC)
MATH2901	Higher Theory of Statistics	(6 UOC)

Plus 2 Arts major level 1 (6 UOC S1 and 6 UOC S2)

Year 3

BINF2001	Bioinformatics 2	(6 UOC)
BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
COMP3311	Database Systems	(6 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Plus Arts major level 2 (6 UOC)

Plus Arts major level 2 or Arts elective (6 UOC)

Plus 2 Year 3 electives (12 UOC)

Year 4

BINF3001	Bioinformatics 3	(6 UOC)
BINF4920	Professional Issues and Ethics for Bioinformatics	(3 UOC)
COMP3711	Software Project Management	(6 UOC)

And one of the following courses:

COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3821	Extended Algorithms and Programming Techniques	(6 UOC)

2 Arts major level 2 (12 UOC)

2 Arts major level 2 or Arts elective (12 UOC)

Level 3 elective (6 UOC)

Note: Overall electives in stages 3 and 4 must include at least one computer science elective and one life science elective.

Year 5

BINF4910	Thesis Part A	(3 UOC)
BINF4911	Thesis Part B	(12 UOC)

Plus 2 level 3 Arts major (12 UOC)

Plus 3 Years 3 or 4 or 5 electives (18 UOC)

Years 3 and 4 Electives

BIOC3111	Molecular Biology of Proteins	(6 UOC)
BIOC3151	Human Genetics and Variation	(6 UOC)
BIOC3281	Recombinant DNA Techniques	(6 UOC)
BIOC3291	Genes, Genomes & Evolution	(6 UOC)
BIOT3011	Biotechnology A	(6 UOC)
BIOT3061	Biopharmaceuticals	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3431	Robotic Software Architecture	(6 UOC)
MATH3801	Probability and Stochastic Processes	(6 UOC)
MATH3901	Higher Probability and Stochastic Processes	(6 UOC)
MICR3021	Microbial Genetics	(6 UOC)

And ONE of the following:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)

Year 5 Electives

BIOT3071	Commercial Biotechnology	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)
COMP3914	Next Generation Database Systems	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
MATH3811	Statistical Inference	(6 UOC)
MATH3821	Statistical Modelling and Computing	(6 UOC)
MATH3911	Higher Statistical Inference	(6 UOC)
MICR3011	Microbial Physiology	(6 UOC)

Level 3 MATH electives and other COMP3/4/9 electives may also be considered. Electives must include at least one life science and at least one COMP course.

Academic Rules

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in Maths extension 1 or a mark of 186-200 in Maths Extension 2 or a UAI > 97 in order to do COMP1711.

2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.

3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.

Computing Requirements

Information regarding recommended computing equipment and software for the program is available from the School of Computer Science and Engineering Student Office.

Professional Recognition

The Institution of Engineers, Australia

For more information, please refer to 'Professional Recognition in the program entry for 3647 Bioinformatics.

3715 Bioinformatics/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

3757 Bioinformatics/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BE (Bioinformatics)/Master of Biomedical Engineering concurrent degree program is offered jointly through the School of Computer Science and Engineering, the Faculty of Science and the Graduate School of Biomedical Engineering. The combined Bachelor of Engineering in Bioinformatics/Master of Biomedical Engineering program allows students to combine the software engineering/molecular biology focus of bioinformatics with the broader engineering and medical emphases of the biomedical engineering program.

Students who are enrolled in a joint program are expected to maintain a Credit (65%) average across courses taken from each of the composite programs. Students who fail to meet this condition will be counselled about their suitability to remain in the combined program.

The stages of a generic combined program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements and overall program requirements.

Program Structure

Plan BINFA13757

Year 1

BINF1001	Bioinformatics 1	(6 UOC)
BIOS1201	Molecules, Cells and Genes	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

And ONE of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

And ONE of the following courses:

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

Students who have completed HSC Biology with a mark of 75 or above may replace BIOS1101 by any of BIOS2021 or BIOS2621 in Year 1. Students who complete BIOS2201 or BIOS2621 in Year 1 will choose an elective in Year 3

Year 2

BINF2001	Bioinformatics 2	(6 UOC)
BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
BIOM2010	Biomedical Engineering Practice	(3 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
LIFE2101	Introductory Biochemistry & Microbiology	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

And ONE of the following courses:

MATH2801	Theory of Statistics	(6 UOC)
MATH2901	Higher Theory of Statistics	(6 UOC)

General Education	(3 UOC)

Year 3

BINF3001	Bioinformatics 3	(6 UOC)
BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
COMP3311	Database Systems	(6 UOC)

And ONE of the following courses:

COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3821	Extended Algorithms and Programming Techniques	(6 UOC)

And ONE of the following courses:

BIOS2021	Genetics	(6 UOC)
BIOS2621	Genetics (Advanced Level)	(6 UOC)

2 BIOM 9XXX Biomedical Engineering electives	(6 UOC each)

1 Bioinformatics elective from the list below:

BIOC3281	Recombinant DNA Techniques	(6 UOC)
BIOT3061	Biopharmaceuticals	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)

And ONE of the following courses:

COMP3331	Computer Networks and Applications	(6 UOC)
COMP3931	Extended Computer Networks and Applications	(6 UOC)

And ONE of the following courses:

MATH2831	Linear Models	(6 UOC)
MATH2931	Higher Linear Models	(6 UOC)

Year 4

2 BIOM9XXX Biomedical Engineering electives	(12 UOC)
General Education	(3 UOC)

2 Bioinformatics electives from Year 3 or Year 4 list below:

BINF4920	Professional Issues and Ethics for Bioinformatics	(3 UOC)
BIOC3111	Molecular Biology of Proteins	(6 UOC)
BIOC3151	Human Genetics and Variation	(6 UOC)
BIOC3291	Genes, Genomes & Evolution	(6 UOC)
BIOM5001	Thesis Part A	(6 UOC)
BIOT3011	Biotechnology A	(6 UOC)
BIOT3071	Commercial Biotechnology	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3151	Foundations of Concurrency	(6 UOC)
COMP3222	Digital Circuits and Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)
COMP4511	User Interface Design and Construction	(6 UOC)
COMP9243	Distributed Systems	(6 UOC)
COMP9314	Next Generation Database Systems	(6 UOC)
COMP9333	Advanced Computer Networks	(6 UOC)
COMP9417	Machine Learning	(6 UOC)
COMP9444	Neural Networks	(6 UOC)
MATH3821	Statistical Modelling and Computing	(6 UOC)
MICR3011	Microbial Physiology	(6 UOC)
MICR3021	Microbial Genetics	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)

And ONE of the following courses:

MATH3801	Probability and Stochastic Processes	(6 UOC)
MATH3901	Higher Probability and Stochastic Processes	(6 UOC)

And ONE of the following courses:

MATH3811	Statistical Inference	(6 UOC)
MATH3911	Higher Statistical Inference	(6 UOC)

Year 5

BIOM5904	Thesis Part B	(12 UOC)
BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)

BIOM9XXX or COMP9XXX 1 Biomedical engineering elective+

And ONE of the following courses:

BIOM9913	Project Report	(12 UOC)
BIOMXXX		

or

2 Bioinformatics electives from Stage 3/4 list	(6 UOC)

Industrial Training

Level 3 MATH electives and other level 3/4/9 COMP electives may be also considered. Electives must include at least two life science electives and at least two COMP or MATH electives.

+Can be substituted for a level 9 COMP elective, preferably from the Stage 4 Bioinformatics elective list.

Recommended Biomedical Engineering Electives:

BIOM9027	Medical Imaging	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9420	Clinical Laboratory Science	(6 UOC)
BIOM9440	Biomedical Practical Measures	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9613	Medical Instrumentation	(6 UOC)

Note that the BE (Bioinformatics) program allows a variation in standard prerequisites for some courses. Bioinformatics students who want to enrol in these courses will need to request manual enrolment after consultation with the program authority.

General Education Requirements

UNSW wants all students to develop skills in a broad range of areas, not just in their specific study discipline, and so students in all degrees are required to undertake a number of general studies courses outside their discipline. It may not be possible for Bioinformatics Engineering students to enrol in general education courses that are similar in content to the courses offered in the Bioinformatics Engineering degree.

For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/undergrad/current/gened.html

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Computer Science and Engineering for more information.

Industrial Training Requirement

At least 60 days of approved industrial training must be completed before graduation. Industrial Training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4. Opportunities exist for 6 months industrial placement in Year 3.

Further Requirements

Assumed Knowledge

Assumed knowledge for Mathematics (MATH1131); students will be expected to have achieved the equivalent of a combined mark of at least 100 in HSC Mathematics and HSC Mathematics Extension 1. Failure to meet this required knowledge means that General Mathematics (MATH1011) will have to be taken first. Assumed knowledge for English: at least band 3 in 2 Unit Standard English.

Professional Recognition

Accreditation will be sought from Engineers Australia and the Australian Computing Society.

Career Opportunities

Data analysis and software development in drug companies, biotechnology companies and medical and biological research institutes. Graduates from this course will also be well trained to take up careers in other areas of computational data analysis, such as in banks and insurance companies. They could also pursue careers in other more general areas of computing.

3651 Software Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The stages of a generic combined program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements and the overall requirements given under Academic Rules below.

Day to day administration of this program is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

Program Structure

Plan SENG13651

Stage 1

INFS1603	Business Data Management	(6 UOC)
INFS1611	Requirements Engineering	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
SENG1031	Software Engineering Workshop 1	(6 UOC)
Stage 1 Science electives		(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

Stage 2

COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2111	System Modeling and Design	(6 UOC)
COMP2411	Logic and Logic Programming	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SENG2010	Software Engineering Workshop 2A	(3 UOC)
SENG2020	Software Engineering Workshop 2B	(3 UOC)
Stage 2 Science electives		(12 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Stage 3

COMP3141	Software System Design and Implementation	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
SENG3010	Software Engineering Workshop 3A	(3 UOC)
SENG3020	Software Engineering Workshop 3B	(3 UOC)
SE Electives		(24 UOC)
Stage 2 Science Electives		(6 UOC)

Stage 4

Stage 2 or 3 Science electives		(30 UOC)
Stage 3 Science electives		(18 UOC)

Stage 5

SENG4910	Thesis Part A	(6 UOC)
SENG4911	Thesis Part B	(12 UOC)
SENG4921	Professional Issues and Ethics	(6 UOC)
SE Electives		(24 UOC)

Honours

Honours will be awarded to students who have achieved superior grades in courses over the whole program including the successful completion of a thesis at sufficient standard. Weighted average marks required for Honours grades are given below: The School of Computer Science and Engineering uses an internal method for calculating this average, the information provided by New South Student is not used for this purpose.

Honours Class 1: WA greater than or equal to 75

Honours Class 2: Division 1: WA equal to 70 up to and including 74

Division 2: WA equal to 65 up to and including 69

Academic Rules

The BE (Software Engineering)/BSc combined program requires the completion of 240 UOC, including at least 84 UOC of science courses, and must contain a major sequence of 42 UOC at Stages 2 and 3, with at least 18 UOC at Stage 3 in a single science discipline. To satisfy the requirement of the combined program, the free electives and the General Education electives of the standard Software Engineering program are assigned to science electives. The science content of the generic combined program consists of:

- 18 UOC of Mathematics in Stages 1 and 2;
- 6 UOC of Science electives in Stage 1;
- 12 UOC of Science electives in Stage 2;
- 6 UOC of Science electives in Stage 3;
- an extra stage of 48 UOC of Science courses

This yields a possible total of 90 UOC of Science. Combined Programs are exempt from the General Education requirement.

The major Science discipline may not be Computer Science.

Students who are enrolled in a combined program are expected to maintain a credit (65% or higher) average across courses taken from each of the composite programs. Students who fail to meet this condition will be counselled about their suitability to remain in the combined program.

Refer to the School of Computer Science and Engineering website for examples of specific SE/Science programs: www.cse.unsw.edu.au/seng

Industrial Training Requirements

All students in the BE in Computer Engineering, Bioinformatics Engineering and Software Engineering programs must complete at least 60 days of approved Industrial Training before the end of Year 4.

Further Requirements

1. A HSC Maths mark of 145-150 is required in 2 & 3 units Maths or 186-200 in 3 & 4 units Maths or a UAI > 97 in order to do COMP1711.
2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.
3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.
4. The chosen courses must form a major sequence of 42 units of credit at stages 2 and 3.
5. To satisfy prerequisites it may be necessary to use a different arrangement of courses than shown above.
6. All students in the BE/BSc Software Engineering/Science program must complete at least 60 days of approved Industrial Training before the end of Year 5 to fulfill the requirements of SENG4903 in stage 5.

Professional Recognition

The Institution of Engineers, Australia

For more information, please refer to 'Professional Recognition' in the program entry for 3648 Software Engineering.

3652 Software Engineering/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Day-to-day administration of this program is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

The stages of the program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements. Approval should be obtained for changes.

Program Structure

Plan SENG13652

Year 1

INFS1603	Business Data Management	(6 UOC)
INFS1611	Requirements Engineering	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
SENG1031	Software Engineering Workshop 1	(6 UOC)
Stage 1 Arts electives		(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Stage 2

COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2111	System Modeling Design	(6 UOC)

COMP2411	Logic and Logic Programming	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SENG2010	Software Engineering Workshop 2A	(3 UOC)
SENG2020	Software Engineering Workshop 2B	(3 UOC)
Arts electives		(12 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Stage 3

COMP3141	Software System Design and Implementation	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
SENG3010	Software Engineering Workshop 3A	(3 UOC)
SENG3020	Software Engineering Workshop 3B	(3 UOC)
SE Electives		(18 UOC)
Arts electives		(12 UOC)

Stage 4

SE electives	(6 UOC)
Arts electives	(42 UOC)

Stage 5

SENG4910	Thesis Part A	(6 UOC)
SENG4911	Thesis Part B	(12 UOC)
SENG4921	Professional Issues and Ethics	(6 UOC)
SE electives		(24 UOC)

1. The chosen Arts courses must include a major sequence of 42 UOC.
2. To satisfy prerequisites it may be necessary to use a different arrangement of courses than shown above.
3. To accommodate particular sequences of Arts electives it may be necessary to change the distribution of SE electives between stages 3, 4 and 5.

Academic Rules

The BE (Software Engineering)/BA combined program requires the completion of 240 units of credit, including at least 60UOC (Units of Credit) of Arts courses, and must contain a major sequence of 42UOC at stages 2 and 3 in a single Arts discipline. To satisfy the requirement of the combined program, the free electives and the General Education electives of the standard Software Engineering program are assigned to Arts electives. Combined Programs are exempt from the General Education requirement.

The major Arts discipline may not be Computer Science.

Students who are enrolled in a combined program are expected to maintain a credit (65% or higher) average across courses taken from each of the composite programs. Students who fail to meet this condition will be counselled about their suitability to remain in the combined program.

The stages of a generic combined program are shown above. In general, it will be necessary to adapt the program by moving courses to meet the requirements of particular Arts majors. This generic program can accommodate 72 units of credit of Arts electives.

Refer to the School of Computer Science and Engineering website for examples of specific SE/Arts programs: www.cse.unsw.edu.au/seng

The Faculty of Arts and Social Science should approve all Arts programs.

Further Requirements

1. An HSC Maths mark of 145-150 is required in 2 & 3 Unit Maths or 186-200 in 3 & 4 Unit Maths or a UAI >97 in order to do COMP1711.
2. A mark of at least 75DN is required in COMP1011 or COMP1711 in order to do COMP1721.
3. A mark of at least 75DN is required in COMP1021 or COMP1721 in order to do COMP2711.
4. The chosen courses must form a major sequence of 42 UOC.
5. To satisfy prerequisites it may be necessary to use a different arrangement of courses than shown above.
6. To accommodate particular sequences of Arts electives it may be necessary to change the distribution of SE electives between stages 3, 4 and 5.
7. All students in the BE/BA Software Engineering/Arts program must complete at least 60 days of approved Industrial Training before the end of Year 5 to fulfill the requirements of SENG4903 in Stage 5.

3653 Software Engineering/Bachelor of Commerce

Bachelor of Engineering Bachelor of Commerce BE BCom

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Day to day administration of this program is conducted through the Computer Science and Engineering Student Office, to which enquiries should be directed.

The stages of the program are shown below. It should be noted that it is possible to adapt the program by moving courses, subject to prerequisite requirements. Approval should be obtained for changes.

Program Structure

Plan SENG13653

Year 1

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
INFS1603	Business Data Management	(6 UOC)
INFS1611	Requirements Engineering	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
SENG1031	Software Engineering Workshop 1	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Year 2

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2111	System Modeling and Design	(6 UOC)
COMP2411	Logic and Logic Programming	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SENG2010	Software Engineering Workshop 2A	(3 UOC)
SENG2020	Software Engineering Workshop 2B	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Year 3

COMP3141	Software System Design and Implementation	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
SENG3010	Software Engineering Workshop 3A	(3 UOC)
SENG3020	Software Engineering Workshop 3B	(3 UOC)
SE Electives		(24 UOC)

Stage 4

Faculty of Commerce & Economics Electives	(48 UOC)

Stage 5

SENG4910	Thesis Part A	(6 UOC)
SENG4911	Thesis Part B	(12 UOC)
SENG4921	Professional Issues and Ethics	(6 UOC)
Software Engineering Electives		(24 UOC)

At least 3 UOC of the Software Engineering electives must be chosen from INFS courses.

Please Note

1. The above staging of the program represents one possible sequence of courses. The staging of the courses may be modified, subject to prerequisites and timetabling. In particular, the FCE and SE electives may be redistributed.

2. Further information regarding SE electives can be found at www.cse.unsw.edu.au/seng

Academic Rules

The Bachelor of Engineering in Software Engineering Bachelor of Commerce combined program requires the following:

- At least 96 units of credit from the courses offered by the Faculty of Commerce and Economics (FCE) including: ACCT 1501, ACCT1511, ECON1101, ECON1102, and
- Completion of a major of at least 48 units of credit in an FCE approved disciplinary stream and a minor of 24 units of credit in INFS courses of which no more than 12 units of credit may be Level 1 courses.
- No more than 60 units of credit of Level 1 FCE courses;
- 6 units of credit of first year mathematics courses as required for the Software Engineering program, and at least 6 units of credit in statistics and mathematics chosen from ECON1203, MATH1041, MATH1141, MATH1081, MATH2400, MATH2859, MATH2801, MATH2901, MATH2841, or alternative statistics and mathematics courses approved by the program advisor.

Students who are enrolled in a combined program are expected to maintain a Credit (65% or higher) average across courses taken from each of the composite programs. Students who fail to meet this condition will be counselled about their suitability to remain in the combined program.

The stages of a generic combined program are shown above. In general, it will be necessary to adapt the program by undertaking courses to meet the requirements of particular Commerce majors. This generic program accommodates 96 UOC of courses from FCE.

The Faculty of Commerce and Economics should approve the BCom program.

3749 Software Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBIomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BE (Software Engineering)/Master of Biomedical Engineering concurrent degree program is offered jointly through the School of Computer Science and Engineering and the Graduate School of Biomedical Engineering. Students who are enrolled in a joint program are expected to maintain a Credit (65%) average across courses taken from each of the composite programs.

Program Structure

Plan SENG13749

Year 1

BIOM2010	Biomedical Engineering Practice	(3 UOC)
INFS1603	Business Data Management	(6 UOC)
INFS1611	Requirements Engineering	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2400	Finite Mathematics	(3 UOC)
SENG1031	Software Engineering Workshop 1	(6 UOC)

And ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)
General Education		(3 UOC)

Year 2

BIOM1001	Professional Biomedical Studies	(3 UOC)
COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2111	System Modeling and Design	(6 UOC)
COMP3711	Software Project Management	(6 UOC)
INFS2603	Systems Analysis and Design	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SENG2010	Software Engineering Workshop 2A	(3 UOC)
SENG2020	Software Engineering Workshop 2B	(3 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)
Biomedical Engineering Elective S1		(6 UOC)
General Education S1		(3 UOC)

Year 3

COMP2411	Logic and Logic Programming	(6 UOC)
COMP3141	Software System Design and Implementation	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)
SENG3010	Software Engineering Workshop 3A	(3 UOC)
SENG3020	Software Engineering Workshop 3B	(3 UOC)
Software Engineering Electives		(18 UOC)

Year 4

BIOM5909	Thesis Part A	(3 UOC)
SENG4921	Professional Issues and Ethics	(6 UOC)
Biomedical Engineering Electives		(18 UOC)
Software Engineering Electives		(18 UOC)

Year 5

BIOM5904	Thesis Part B	(12 UOC)
And ONE of the following options:		
BIOM9913	Project Report	(12 UOC)
or		
2 Biomedical Electives		(12 UOC)
Biomedical Engineering Electives		(18 UOC)
Software Engineering Electives		(6 UOC)

Preferred Biomedical Engineering Electives

BIOM9321	Physiological Fluid Mechanics	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9420	Clinical Laboratory Science	(6 UOC)
BIOM9440	Biomedical Practical Measures	(6 UOC)
BIOM9613	Medical Instrumentation	(6 UOC)

Other Biomedical Engineering Electives

BIOM9027	Medical Imaging	(6 UOC)
BIOM9050	Microprocessors and Circuit Design for Biomedical Engineers	(6 UOC)
BIOM9060	Biomedical Systems Analysis	(6 UOC)
BIOM9430	Electromedical Standards	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9510	Introductory Biomechanics	(6 UOC)
BIOM9541	Mechanics of the Human Body	(6 UOC)
BIOM9601	Biomedical Applications of Microcomputers 1	(6 UOC)
BIOM9621	Biological Signal Analysis	(6 UOC)
BIOM9701	Dynamics of the Cardiovascular System	(6 UOC)

General Education Requirements

UNSW wants all students to develop skills in a broad range of areas, not just in their specific study discipline, and so students in all degrees are required to undertake a number of general studies courses outside their discipline. It may not be possible for Computer Engineering students to enrol in general education courses that are similar in content to the courses offered in the Computer Engineering degree. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/undergrad/current/gened.html

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School Office for more information.

3983 Computer Science/Bachelor of Science**Bachelor of Science Bachelor of Science (Computer Science) BSc BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program, students can add a Science program to the standard, professionally accredited BSc in Computer Science program offered by the School of Computer Science and Engineering. All Science majors within program 3970 are available.

Students who meet the entry requirements for the BSc in Computer Science program 3978 and for the Bachelor of Science program 3970 may apply to enter the combined Bachelor of Science Bachelor of Science (Computer Science) program.

Students should schedule the Science and Computer Science components to suit their preferences while meeting constraints of timetables and prerequisites. The Science Faculty section in this Handbook describes the Science options and the School of Computer Science and Engineering Student Office can supply sample programs indicating what previous students have arranged.

In addition to the BSc in Computer Science program 3978, students must complete a minimum of 84 units of credit in Science courses, including a major sequence in an approved area. The Science office must approve the Science component while the School of Computer Science and Engineering will approve the final program and schedule.

The award of Honours in either the Science or the Computer Science program requires at least one further year of study.

Students wishing to gain a degree at Honours level as part of their combined degree program shall meet all the relevant requirements of the faculty concerned and of the appropriate schools. Such students may enrol for the Honours year only on the recommendation of both the program authorities concerned.

Program Structure**Plan COMPA13983****Year 1****Sample Program:**

Choose ONE of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)
Plus Science Electives, Level 1		(24 UOC)

Year 2

COMP2121	Microprocessors and Interfacing	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

And ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)
Plus Science Electives, Level 2		(24 UOC)

Year 3

COMP3111	Software Engineering	(6 UOC)
Plus Level 3/4 Computer Science Electives		(18 UOC)
Plus Science Electives, Levels 2 & 3		(24 UOC)

Year 4

COMP2920 Professional Issues and Ethics	(3 UOC)
Plus Level 3/4 Computer Science Electives	(6 UOC)
Plus Other Computer Science Electives	(6 UOC)
Plus Science Electives, Levels 2 & 3	(12 UOC)
Plus Electives	(15 UOC)
General Education Courses	(6 UOC)

External courses which may be included here and count towards the 84 UOC Computer Science electives, include: MATH2301, MATH3411/3301, TELE3013, PHYS1601 & 2601 and any of ELEC1011, 2031, 2032, 2042, 3004, 3006, 3014, 3016, 3017, 3041, 4042, 4412, 4413, 4503, 4522 and 4532.

General Education Requirements

Students in this program may also need to satisfy the General Education requirements. It may not be possible for computing students to enrol in General Education courses which are similar in content to the courses offered in their respective degree program. For a comprehensive list, please refer to the CSE website: www.cse.unsw.edu.au/school/teaching/courses/gened.html

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Computer Science and Engineering for more information.

3968 Computer Science/Bachelor of Arts**Bachelor of Science Bachelor of Arts BSc BA****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The double degree of BSc (Computer Science) BA normally requires an additional stage of study, and enables students to complete the requirements of the BSc (Computer Science) and in a school, department, or program of the Faculty of Arts and Social Sciences.

For admission to the program, students must satisfy the entry requirements for both the BSc (Computer Science) and the Faculty of Arts and Social Sciences. Students in this program must complete 192 units of credit of study. Students are required to undertake courses totalling 84 units of credit from the Science component and also 84 units of credit from the Arts component of which 42 units of credit would be from an approved major sequence (refer to Lists A and B in the rules for program 3400 Bachelor of Arts, in the Faculty of Arts and Social Science section of this Handbook). The remaining 24 units of credit may be taken from either area.

Students should enrol in at least 24 Level 1 units of credit and no more than 36 Level 1 within the Arts component of the program. Of these, no more than 12 units of credit can be taken in any one school or department.

The award of Honours in either the Arts and Social Sciences or the Computer Science component requires at least a further year of study, and the Honours year is subject to the admission requirements of the corresponding Arts and Social Sciences program or the Honours program in Computer Science.

The School of Computer Science and Engineering administers this degree.

The specific requirements for the BSc Computer Science are described in the Engineering section of the Handbook, under program code 3978 BSc Computer Science.

Program Structure**Plan COMPA13968****Year 1**

MATH1081 Discrete Mathematics	(6 UOC)

And ONE of the following courses:

COMP1011 Computing 1A	(6 UOC)
COMP1711 Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021 Computing 1B	(6 UOC)
COMP1721 Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131 Mathematics 1A	(6 UOC)
MATH1141 Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231 Mathematics 1B	(6 UOC)
MATH1241 Higher Mathematics 1B	(6 UOC)

Year 2

COMP2121 Microprocessors and Interfacing	(6 UOC)
COMP2041 Software Construction: Techniques and Tools	(6 UOC)
COMP2920 Professional Issues and Ethics	(3 UOC)

And ONE of the following courses:

COMP2011 Data Organisation	(6 UOC)
COMP2711 Higher Data Organisation	(6 UOC)

Year 3

COMP3111 Software Engineering	(6 UOC)
Plus Level 3/4 Computer Science Electives	(24 UOC)

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Computer Science and Engineering for more information.

3982 Computer Science/Bachelor of Digital Media**Bachelor of Science Bachelor of Digital Media BSc BDM****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BSc (Computer Science) BDM combined program provides both a technical and creative foundation to the development and use of computer graphics. It also allows specialisation in the final semester in either the technical or creative strand of computer graphics and associated fields.

Program Structure**Plan COMPA13982****Plan DIGMA13982****Year 1****Sample Program:**

SOMA1600 Language of Digital Media	(6 UOC)
SOMA1604 Introduction to Digital Media	(6 UOC)
SOMA1608 Digital Composite 1	(6 UOC)
SOMA2602 Sound Media 1	(6 UOC)
MATH1081 Discrete Mathematics	(6 UOC)

And ONE of the following courses:

COMP1011 Computing 1A	(6 UOC)
COMP1711 Higher Computing 1A	(6 UOC)

And ONE of the following courses:

COMP1021 Computing 1B	(6 UOC)
COMP1721 Higher Computing 1B	(6 UOC)

And ONE of the following courses:

MATH1131 Mathematics 1A	(6 UOC)
MATH1141 Higher Mathematics 1A	(6 UOC)

Year 2

COMP2041 Software Construction: Techniques and Tools	(6 UOC)
MATH2400 Finite Mathematics	(3 UOC)
MATH2859 Probability, Statistics & Information	(3 UOC)
SOMA1603 Digital Video 1	(6 UOC)
SOMA2607 Multimedia 1	(6 UOC)
SOMA2609 3D Graphics & Modelling 1	(6 UOC)

And ONE of the following courses:

COMP2011 Data Organisation	(6 UOC)
COMP2711 Higher Data Organisation	(6 UOC)

Plus COFA elective (6 UOC)
Plus SMA or CSE elective (6 UOC)

Year 3

COMP3111 Software Engineering (6 UOC)
COMP3421 Computer Graphics (6 UOC)
SAHT3614 Screen Culture (6 UOC)
Plus COFA electives (6 UOC)
Plus Level 3/4 Computer Science Electives (12 UOC)
Plus SMA or CSE elective (12 UOC)

Year 4

SOMA3610 Digital Studio (6 UOC)
SOMA3616 Professional Practice (6 UOC)
SOMA3612 Professional Portfolio (6 UOC)
SAHT3613 Digital Theory and Aesthetics (6 UOC)
Plus SMA or CSE electives (6 UOC)
Plus Level 3/4 Computer Science Electives (18 UOC)

General Education Requirements

Students in this program are exempt from General Education requirements.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Computer Science and Engineering for more information.

Fast-Track Programs with Master of Engineering Science**3645 Computer Engineering/Master of Engineering Science – Plan COMPL13645****Bachelor of Engineering Master of Engineering Science BE MEngSc**

Students may undertake 4.5 years (10 semesters) full-time combined program leading to the award of a Bachelor of Engineering and a Master of Engineering Science in Computer Engineering.

Students undertake the first three years (6 semesters) of the BE program in Computer Engineering. Subject to satisfying 75% over Years 2 and 3 (see Rules for Progression and the Award of Degrees), they (a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year; (b) they undertake a 12 units of credit of project/thesis work over the summer (9th) semester; and (c) they undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

3647 Bioinformatics/Master of Engineering Science – Plan BINFL13647**Bachelor of Engineering Master of Engineering Science BE MEngSc**

Students may undertake 4.5 years (10 semesters) full-time fast-track program leading to the award of a Bachelor of Engineering and a Master of Engineering Science in Bioinformatics.

Students undertake the first three years (6 semesters) of the BE program in Bioinformatics. Subject to satisfying a minimum performance over these three years (see Rules for Progression and the Award of Degrees), they (a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year; (b) they undertake a 12 units of credit of project/thesis work over the summer (9th) semester; and (c) they undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

3648 Software Engineering/Master of Engineering Science – Plan SENGL13648**Bachelor of Engineering Master of Engineering Science BE MEngSc**

Students may undertake a 4.5 years (10 semesters) full-time fast-track program leading to the award of a Bachelor of Engineering and a Master of Engineering Science in Software Engineering.

Students undertake the first three years (6 semesters) of the BE program in Software Engineering. Subject to satisfying 75% over years 2 and 3 (see 'Rules for Progression and the Award of Degrees'), they (a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year; (b) they undertake a 12 units of credit of project/thesis work over the summer (9th) semester; and (c) they undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

School of Electrical Engineering and Telecommunications

Head of School: Professor BG Celler

Director of Academic Studies: Associate Professor E Ambikairajah

Administrative Officers: Ms. G. Fong

The School comprises several discipline areas indicating shared research interests and teaching commitments: Telecommunications; Signal Processing; Energy Systems; Microelectronics; Photonics; Systems and Control. Electrical Engineering and Telecommunications has close links with the pure sciences and mathematics. Its technology is changing rapidly and the School's teaching and research programs are constantly being updated to meet the challenges of present and future needs.

The School offers undergraduate and graduate training in all branches of the professions of electrical engineering and telecommunications. Our degree programs are accredited by the Institution of Engineers, Australia, as meeting the requirements for admission to graduate membership. The School is also associated with the Australian Photonics Co-operative Research Centre which conducts research into optical fibre communication devices and technology.

A very vibrant Co-op program is offered for Electrical Engineering and Telecommunications students. Co-operative scholarships are funded by Australia's premier industries.

Summary of Undergraduate Programs**Normal full-time**

Single Degree Programs	Duration
3640 BE in Electrical Engineering	4 years
3643 BE in Telecommunications	4 years
3644 BE in Photonic Engineering	4 years

Combined Degree Programs

3646 BE BA in Telecommunications	5 years
3720 BE BA in Electrical Engineering	5 years
3725 BE BSc in Electrical Engineering	5 years
3641 BE BSc in Telecommunications	5 years
3634 BE BSc in Photonic Engineering	5 years
3715 BE BCom in Electrical Engineering	5.5 years
3715 BE BCom in Photonic Engineering	5.5 years
3715 BE BCom in Telecommunications	5.5 years

Fast-Track Programs

3640 BE MEngSc in Electrical Engineering	4.5 years
3643 BE MEngSc in Telecommunications	4.5 years

Concurrent Degree Programs

3723 BE MBiomedE in Telecommunications	5 years
3727 BE MBiomedE in Electrical Engineering	5 years

Options within Electrical Engineering include: Telecommunications, Computer Systems, Systems & Control, Energy Systems, Microelectronics, Signal Processing.

The undergraduate curricula are progressively revised to provide flexible training to suit the future needs of students. Individual student needs can be further met by substitution provisions within the programs.

Combined Degree Programs

Combined degree programs lead to the award of the Bachelor of Engineering in either Electrical Engineering or Telecommunications, combined with a Bachelor degree in Arts or Science (usually Computer Science, Mathematics or Physics). There is a fast-track degree available which leads to the awards of Bachelor of Engineering in either Electrical Engineering or Telecommunications and Master of Engineering Science. With the Graduate School of Biomedical Engineering, there is also available a concurrent degree program leading to the award of Bachelor of Engineering/Master of Biomedical Engineering. Students who are in combined degree programs must maintain a Credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

Guidelines for Substitution of Courses

To suit the special abilities or needs of individual students, a limited number of course substitutions is permitted within each program. Any such substitution must have prior approval of the Head of School.

1. The substituted course is of at least the same length and level as the prescribed course.
2. Core courses are normally substituted with courses covering similar material.

3. Students may substitute for two of the Professional Electives, courses of suitable level and difficulty from areas relevant to the profession of Electrical Engineering. One of these substitutions may be a Year 3 elective from within the School. Substitution of one postgraduate course within the School is permitted, provided that the student has passed Year 3 Electrical Engineering and Telecommunications courses at an adequate level and a similar course is not offered at the undergraduate level.

4. Substitution is not permitted if it unduly restricts the range of courses studied to only one area of electrical engineering or computer systems.

5. Substitution is normally not permitted in Year 1 or Year 2.

Guide to Industrial Training Requirement

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should be involved in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the company.

Industrial training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3640 Electrical Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School offers undergraduate and graduate training in all branches of the professions of electrical engineering and telecommunications. The Degree programs are accredited by The Institution of Engineers, Australia as meeting the requirements for admission to graduate membership. The School is also associated with the Australian Photonics Co-operative Research Centre which conducts research into Optical Fibre communication devices and technology.

A very vibrant Co-op program is offered for Electrical Engineering and Telecommunications students. Co-operative scholarships are funded by Australia's premier industries.

Options within Electrical Engineering include: Telecommunications, Photonics, Systems & Control, Energy Systems, Microelectronics, Signal Processing.

The undergraduate curricula are being progressively revised to provide flexible training to suit the future needs of students. Individual student needs can be further met by substitution provisions within the programs.

Program Structure

Year 1

Session One

ELEC1010	Introduction to Electrical Engineering	(3 UOC)
ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)

Session Two

COMP1091	Solving Problems with Software	(6 UOC)
ELEC1041	Digital Circuits	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2

Session One

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)

Session Two

ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

And TWO General Education courses in Session 1 and TWO General Education courses in Session 2.

Note: MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

Year 3

Session One

ELEC2041	Microprocessors & Interfacing	(6 UOC)
ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
ELEC3006	Electronics A	(6 UOC)

Session Two

ELEC3014	Systems and Control 1	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)

TWO Electives from the following:

COMP2011	Data Organisation	(6 UOC)
ELEC3015	Electric Energy 2	(6 UOC)
ELEC3016	Electronics B	(6 UOC)
ELEC3041	Real Time Engineering	(6 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
TELE3018	Data Networks 1	(6 UOC)

Students who intend to major in particular disciplines should note that certain Year 3 elective courses may be prerequisites for the Professional Electives they choose in Year 4. COMP2011 may be taken at the higher level (COMP2711).

Year 4

Session One

ELEC4010	Project Management for Professional Services	(3 UOC)
ELEC4910	Thesis Part A	(3 UOC)

And THREE Professional Electives

Session Two

ELEC4011	Ethics & Elec. Eng. Practice	(3 UOC)
ELEC4911	Thesis Part B	(9 UOC)

And TWO Professional Electives

Note: The Thesis may only be taken by students with an Honours-level weighted average at the end of Year 3. Other students enrol in the Group Thesis (ELEC4914 and ELEC4915).

Students who intend to major in particular disciplines should note that certain Year 3 elective courses may be prerequisites for the Professional Electives they choose in Year 4.

COMP2011 may be taken at the higher level (COMP2711).

Professional Electives

Microelectronics

ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)
ELEC4532	Integrated Digital Systems	(6 UOC)

Systems and Control

ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)

Energy Systems

ELEC4205	Electrical Energy Systems	(6 UOC)
ELEC4216	Electrical Drive Systems	(6 UOC)
ELEC4240	Power Electronics	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)

Signal Processing

ELEC4042	Signal Processing 2	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)

Telecommunications

TELE4313	Optical Communications	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)

Computer Systems

COMP3111	Software Engineering	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3231	Operating Systems	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)

Business Administration

ELEC4444	New Business Creation	(6 UOC)

Professional Elective courses in Computer Systems area require either COMP2011 or COMP2021 as a prerequisite.

Because of timetable clashes, not all combinations of courses are possible.

The program selected by each student must be approved by the Head of School. Not all electives are offered each session, nor is the full range available to part-time students. Students are advised each year of the timetable of available electives.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial Training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of Engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the company.

Industrial Training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Part-time Programs

After completing Year 1 full-time, it is possible for students to progress with a program which has a part-time load (less than 18 units of credit in any session). Very few undergraduate courses are offered in the evenings and students need to be able to attend classes as the timetable demands. Formal part-time programs, that provide courses at times suited to part-time students, are not offered.

Further Information**Guidelines for Substitution of Courses**

To suit the special abilities or needs of individual students a limited number of course substitutions is permitted within each program. Any such substitution must have prior approval of the Head of School.

1. The substituted course is of at least the same length and level as the prescribed course.
2. Core courses are normally substituted with courses covering similar material.
3. Students may substitute for two of the Professional Electives, courses of suitable level and difficulty from areas relevant to the profession of Electrical Engineering. One of these substitutions may be a Year 3 elective from within the School. Substitution of one postgraduate course within the School is permitted, provided that the student has passed Year 3 Electrical Engineering and Telecommunications courses at an adequate level and a similar course is not offered at the undergraduate level.
4. Substitution is not permitted if it unduly restricts the range of courses studied to only one area of electrical engineering or computer systems.
5. Substitution is normally not permitted in Year 1 or Year 2.

Computing Requirements

Information regarding recommended computing equipment for the courses offered by the School is available from the School Office or the School's computer resources website.

3643 Telecommunications**Bachelor of Engineering BE****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School offers undergraduate and graduate training in all branches of the professions of electrical engineering and telecommunications. The Degree programs are accredited by The Institution of Engineers, Australia as meeting the requirements for admission to graduate membership. The School is also associated with the Australian Photonics Co-operative Research Centre which conducts research into Optical Fibre communication devices and technology.

A very vibrant Co-op program is offered for Electrical Engineering and Telecommunications students. Co-operative scholarships are funded by Australia's premier industries.

Options within Electrical Engineering include: Telecommunications, Photonics, Systems & Control, Energy Systems, Microelectronics, Signal Processing.

The undergraduate curricula are being progressively revised to provide flexible training to suit the future needs of students. Individual student needs can be further met by substitution provisions within the programs.

Program Structure

Year 1

Session One

ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)
TELE1010	Introduction to Telecommunications	(3 UOC)

Session Two

COMP1091	Solving Problems with Software	(6 UOC)
ELEC1041	Digital Circuits	(6 UOC)
MATH1241	Higher Complex Analysis	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2

Session One

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Session Two

ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
TELE3018	Data Networks 1	(6 UOC)
Two General Education courses		(6 UOC)

Note: MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

Year 3

Session One

ELEC3006	Electronics A	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
One General Education course		(3 UOC)

Session Two

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
TELE3015	High Freq Electromagnetics	(3 UOC)
One General Education course		(3 UOC)

ONE Elective from the following:

COMP2011	Data Organisation	(6 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
ELEC3016	Electronics B	(6 UOC)
ELEC3041	Real Time Engineering	(6 UOC)

Notes: Students who intend to major in particular disciplines should note that certain Year 3 elective courses may be prerequisites for the Professional Electives they choose in Year 4.

COMP2011 may be taken at the higher level (COMP2711)

Year 4

Session One

ELEC4010	Project Management for Professional Services	(3 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)
TELE4910	Thesis Part A	(3 UOC)
ONE Professional Elective		(6 UOC)

Session Two

ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
TELE4911	Thesis Part B	(9 UOC)
TWO Professional Electives		(12 UOC)

Note: The Thesis is taken by students with an Honours-level weighted average at the end of Year 3. Other students enrol in the Group Thesis (TELE4914 and TELE4915).

Professional Electives

Microelectronics

ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)
ELEC4532	Integrated Digital Systems	(6 UOC)

Systems & Control

ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)

Signal Processing

ELEC4042	Signal Processing 2	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)

Telecommunications

TELE4313	Optical Communications	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)

Note: TELE4363, TELE4352 and TELE4354 are Core courses for BE in Telecommunications students.

Computer Systems

COMP3111	Software Engineering	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3231	Operating Systems	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)

Business Administration

ELEC4444	New Business Creation	(6 UOC)

Professional Elective courses in the Computer Systems area require either COMP2011 or COMP2021 as a prerequisite.

Because of timetable clashes, not all combinations of courses are possible.

The program selected by each student must be approved by the Head of School. Not all electives are offered each session, nor is the full range available to part-time students. Students are advised each year of the timetable of available electives.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training Requirements

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial Training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of Engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the Company

Industrial Training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Further Information

Guidelines for Substitution of Courses

To suit the special abilities or needs of individual students a limited number of course substitutions is permitted within each program. Any such substitution must have prior approval of the Head of School.

1. The substituted course is of at least the same length and level as the prescribed course.
2. Core courses are normally substituted with courses covering similar material.
3. Students may substitute for two of the Professional Electives, courses of suitable level and difficulty from areas relevant to the profession of Electrical Engineering. One of these substitutions may be a Year 3 elective from within the School. Substitution of one postgraduate course within the School is permitted, provided that the student has passed Year 3 Electrical Engineering and Telecommunications courses at an adequate level and a similar course is not offered at the undergraduate level.
4. Substitution is not permitted if it unduly restricts the range of courses studied to only one area of electrical engineering or computer systems.
5. Substitution is normally not permitted in Year 1 or Year 2.

Computing Requirements

Information regarding recommended computing equipment for the courses offered by the School is available from the School Office or the School's computer resources website.

3644 Photonic Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School offers undergraduate and graduate training in all branches of the professions of electrical engineering and telecommunications. The Degree programs are accredited by The Institution of Engineers, Australia as meeting the requirements for admission to graduate membership. The School is also associated with the Australian Photonics Co-operative Research Centre which conducts research into Optical Fibre communication devices and technology.

A very vibrant Co-op program is offered for Electrical Engineering and Telecommunications students. Co-operative scholarships are funded by Australia's premier industries.

Options within Electrical Engineering include: Telecommunications, Photonics, Systems & Control, Energy Systems, Microelectronics, Signal Processing.

The undergraduate curricula are being progressively revised to provide flexible training to suit the future needs of students. Individual student needs can be further met by substitution provisions within the programs.

Program Structure

Year 1

Session One

ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

PHTN1010	Introduction to Photonics	(3 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)

Session Two

COMP1091	Solving Problems with Software	(6 UOC)
ELEC1041	Digital Circuits	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231)

Year 2

Session One

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
PHYS2030	Laboratory A	(3 UOC)
PHYS2040	Quantum Physics	(3 UOC)

Session Two

ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MATH2130	Higher Mathematical Methods for Differential Equations	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
PHYS2050	Electromagnetism	(3 UOC)
General Education		(6 UOC)

Note: MATH2111, MATH2620 and MATH2130 may be taken at the ordinary level (MATH2011, MATH2520 and MATH2120).

Year 3

Session One

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3006	Electronics A	(6 UOC)
PHYS3030	Electromagnetism (Advanced)	(3 UOC)
PHYS3770	Laser and Spectroscopy Lab	(3 UOC)

One 6UOC General Education Courses needs to be taken in Year 3 Session 1.

Session Two

ELEC3017	Electrical Engineering Design	(6 UOC)
PHYS3060	Advanced Optics	(3 UOC)
PHYS3310	Physics of Solid State Devices	(3 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)

6 UOC electives from the following courses:

COMP2011	Data Organisation	(6 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
PHYS3010	Quantum Mechanics (Advanced)	(3 UOC)
PHYS3080	Solid State Physics	(3 UOC)
TELE3018	Data Networks 1	(6 UOC)

Notes: The elective courses ELEC2041, PHYS3010 and PHYS3080 are scheduled in Session 1 only. In this case, the General Education elective can be moved to Session 2.

PHYS3030 may be taken at the ordinary level (PHYS3230).

Year 4

Session One

ELEC4010	Project Management for Professional Services	(3 UOC)
ELEC4910	Thesis Part A	(3 UOC)
PHYS4979	Photonic Devices	(6 UOC)
TELE4313	Optical Communications	(6 UOC)
One Professional Elective		(6 UOC)

Session Two

ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
ELEC4911	Thesis Part B	(9 UOC)
Two Professional Electives		(12UOC)

Notes: The Thesis may only be taken by students with an Honours level weighted average at the end of Year 3. Other students should enrol in the Group Thesis (ELEC4914 and ELEC4915).

Students who intend to major in particular disciplines should note that certain Year 3 elective courses may be prerequisites for the Professional Electives they choose in Year 4.

Professional Electives**Microelectronics**

ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)

Energy Systems

ELEC4240	Power Electronics	(6 UOC)

Systems and Control

ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)

Signal Processing

ELEC4042	Signal Processing 2	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)
PHTN4310	Optical Signal Processing	(6 UOC)

Telecommunications

TELE4314	Optical Communication Systems	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)

Computer Systems

COMP3111	Software Engineering	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)

Business Administration

ELEC4444	New Business Creation	(6 UOC)

Physics

PHYS4949	Advanced Topics in Physics	(6 UOC)

Note: Professional Elective courses in Computer Systems area require either COMP2011 or COMP2021 as a prerequisite.

Because of timetable clashes, not all combinations of courses are possible.

The program selected by each student must be approved by the Head of School. Not all electives are offered each session, nor is the full range available to part-time students. Students are advised each year of the timetable of available electives.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial Training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of Engineering.

At the end of each period of employment every student must submit a report, typically 2000-30000 words, summarising the work done, the training received and including a description of the organisation of the Company.

Industrial Training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Further Information**Guidelines for Substitution of Courses**

To suit the special abilities or needs of individual students a limited number of course substitutions is permitted within each program. Any such substitution must have prior approval of the Head of School.

1. The substituted course is of at least the same length and level as the prescribed course.

2. Core courses are normally substituted with courses covering similar material.

3. Students may substitute for two of the Professional Electives, courses of suitable level and difficulty from areas relevant to the profession of Electrical Engineering. One of these substitution may be a Year 3 elective from within the School. Substitution of one postgraduate course within the School is permitted, provided that the student has passed Year 3 Electrical Engineering and Telecommunications courses at an adequate level and a similar course is not offered at the undergraduate level.

4. Substitution is not permitted if it unduly restricts the range of courses studied to only one area of electrical engineering or computer systems.

5. Substitution is normally not permitted in Year 1 and Year 2.

Computer Requirements

Information regarding recommended computing equipment for the courses offered by the School is available from the School Office or the School's computer resource website.

3725 Electrical Engineering/Bachelor of Science**Bachelor of Engineering Bachelor of Science BE BSc****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Combined degree programs lead to the award of the Bachelor of Engineering in either Electrical Engineering or Telecommunications, combined with a Bachelor degree in Arts or Science (usually Computer Science, Mathematics or Physics). Students who are in the combined degrees program must maintain a credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

These programs qualify candidates for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged.

Program Structure**Year 1**

As for Program 3640

Year 2**Session One**

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)

Session Two

Science Elective/Core

Science Elective

ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Notes: The Core/Elective course will be PHYS2999 for Science with a Physics major, COMP2011 or COMP2711 & COMP2041 for Computer Science, and is a free elective for either Science with a Mathematics major.

For a Science Major other than Computer Science, COMP1021 can be moved to Session 2 to enable a Session 1 elective to be taken.

MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

Year 3**Session One**

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
ELEC3006	Electronics A	(6 UOC)

Year 2 Science Elective

Session Two

ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)

One ELEC Elective (Year 3)

Year 4**Session One**

Four Year 3 Science Electives

Session Two

One Year 3 Science Elective

One ELEC Elective (Year 3)

Two Electives [Science, ELEC (Year 3)]

Note: ELEC (Year 3) electives are chosen from the Year 3 Elective list for 3640. It will be possible to delay/advance electives by 1 or more sessions to enable as flexible a choice as possible, providing the structure of the program (i.e. units of credit in each session) is maintained, and that ultimately all required core and elective courses are taken.

Year 5

As for Year 4 of Program 3640

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should be involved in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the company.

Industrial training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Further Information**Guidelines for Substitution of Courses**

For 'Guidelines for Substitution of Courses', please refer to the program entry for 3640 Electrical Engineering.

3720 Electrical Engineering/Bachelor of Arts**Bachelor of Engineering Bachelor of Arts BE BA****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Combined degree programs lead to the award of the Bachelor of Engineering in either Electrical Engineering or Telecommunications, combined with a Bachelor degree in Arts or Science (usually Computer Science, Mathematics or Physics). Students who are in the combined degrees program must maintain a credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

These programs qualify candidates for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged.

All combined degree programs are administered by the School of Electrical Engineering and Telecommunications.

Program Structure**Year 1**

As for Program 3640

Year 2**Session One**

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)

Session Two

Arts Elective/Core

Arts Elective

ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Note: COMP2091 can be moved to Session 2 to enable a Session 1 elective to be taken. MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011). COMP1091 and COMP2091 may be taken at the ordinary level (COMP1711 and COMP1721).

Year 3**Session One**

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
ELEC3006	Electronics A	(6 UOC)

Year 2 Arts Elective

Session Two

ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)

One ELEC Elective (Year 3)

Year 4**Session One**

Four Year 3 Arts Electives

Session Two

One Year 3 Arts Elective

One ELEC Elective (Year 3)

Two Electives [Art, ELEC (Year 3)]

Note: ELEC (Year 3) electives are chosen from the Year 3 Elective list for 3640. It will be possible to delay/advance elective by 1 or more session to enable as flexible a choice as possible, providing the structure of the program (i.e. units of credit in each session) is maintained, and that ultimately all required core and elective courses are taken.

Year 5

As for Year 4 of Program 3640

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

1. Students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. subjects designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one school of department.

2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environmental Studies*
European Studies
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

*Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.

3. Except for courses completed as part of the Environmental Studies major sequences, no more than 12 units of credit may be obtained from subjects in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No subject included for credit in the BE programs can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students must complete the full requirements of the program 3640 BE in Electrical Engineering except that they are exempt from the General Education requirement of the BE BSc program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE BA program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' in this Handbook.

Industrial Training

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should be involved in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the company.

Industrial training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Further Information

Computing Requirements

Information regarding recommended computing equipment for the courses offered by the School is available from the School Office or the School's computer resources website.

Guidelines for Substitution of Courses

For 'Guidelines for Substitution of Courses', please refer to the program entry for 3640 Electrical Engineering.

3715 Electrical Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook. Information about the program structure can be found in the Online Handbook program entry for 3715 BE BCom under the area of specialisation Electrical Engineering.

3727 Electrical Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBIomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

A Bachelor of Engineering degree in Electrical Engineering and a Master of Biomedical Engineering degree (BE MBIomedE) can both be completed in five years of concurrent study. Students must maintain a 65% Credit average to retain their enrolment in MBIomedE.

Program Structure

Year 1

Session One

BIOM1001	Professional Biomedical Studies	(3 UOC)
ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)

and ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

BIOM2010	Biomedical Engineering Practice	(3 UOC)
CHEM1817	Chemistry 1ME	(3 UOC)
COMP1091	Solving Problems with Software	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

and ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

Session One

BIOM9420	Clinical Laboratory Science	(6 UOC)
COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
MATH2011	Several Variable Calculus	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)

Session Two

ELEC1041	Digital Circuits	(6 UOC)
ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

and ONE of the following courses:

MATH2520	Complex Analysis	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
General Education		(3 UOC)

Year 3

Session One

ELEC2041	Microprocessors & Interfacing	(6 UOC)
ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3006	Electronics A	(6 UOC)
ELEC4010	Project Management for Professional Services	(3 UOC)
General Education		(3 UOC)

Session Two

ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
Plus one Biomedical Engineering Elective		(6 UOC)

Year 4

Session One

BIOM9430	Electromedical Standards	(6 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
Plus one Biomedical Engineering Elective		(6 UOC)

Session Two

BIOM5910	Thesis Part A	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)
Plus one Electrical Engineering Elective from Stage 3 List		

Year 5

Session One

BIOM5911	Thesis Part B	(6 UOC)
Two Biomedical Engineering Electives		(12 UOC)
One Electrical Engineering Professional Elective		(6 UOC)

Session Two

BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)
BIOM9913	Project Report	(12 UOC)
Plus one Electrical Engineering Elective from Stage 3 List		

Preferred Biomedical Engineering Electives

Session Two

BIOM9027	Medical Imaging	(6 UOC)

Other Biomedical Engineering Electives

Session One

BIOM9060	Biomedical Systems Analysis	(6 UOC)
BIOM9510	Introductory Biomechanics	(6 UOC)
BIOM9701	Dynamics of the Cardiovascular System	(6 UOC)
SESC9451	Experimental Biomechanics	(6 UOC)

Session Two

ANAT2511	Fundamentals of Anatomy	(6 UOC)
BIOM9321	Physiological Fluid Mechanics	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9440	Biomedical Practical Measures	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9541	Mechanics of the Human Body	(6 UOC)
BIOM9551	Biomechanics of Physical Rehabilitation	(6 UOC)
BIOM9561	Mechanical Properties of Biomaterials	(6 UOC)

Electrical Engineering & Telecommunications Stage 3 Elective List

Electronics

ELEC3016	Electronics B	(6 UOC)

Energy Systems

ELEC3015	Electric Energy 2	(6 UOC)

Control

ELEC3014	Systems and Control 1	(6 UOC)
ELEC3041	Real Time Engineering	(6 UOC)

Telecommunications

TELE3013	Telecommunication Systems 1	(6 UOC)
TELE3018	Data Networks 1	(6 UOC)

Computer Systems

COMP2021	Digital System Structures	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Electrical Engineering & Telecommunications Professional Electives

Electronics

ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)
ELEC4532	Integrated Digital Systems	(6 UOC)

Control

ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)

Energy Systems

ELEC4205	Electrical Energy Systems	(6 UOC)
ELEC4216	Electrical Drive Systems	(6 UOC)
ELEC4240	Power Electronics	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)

Signal Processing

ELEC4042	Signal Processing 2	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)

Business Administration

ELEC4444	New Business Creation	(6 UOC)

Telecommunications

TELE4313	Optical Communications	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)

Computer Systems

COMP3231	Operating Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3311	Database Systems	(6 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

Each Faculty has responsibility for deciding what courses are able to be counted towards the General Education requirement for their students. The Faculty of Engineering is committed to providing the widest range of choice of general education electives for its students. It strongly encourages students to make the best use of this flexibility. Please contact your School Office for further information on General Education electives available to you.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Electrical Engineering and Telecommunications for more information.

3641 Telecommunications/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Combined degree programs lead to the award of the Bachelor of Engineering in either Electrical Engineering or Telecommunications, combined with a Bachelor degree in Arts or Science (usually Computer Science, Mathematics or Physics). Students who are in the combined degrees program must maintain a credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

These programs qualify candidates for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged.

Program Structure

Year 1

As for Program 3643

Year 2

Session One

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Session Two

ELEC2032	Electronics and Systems	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
TELE3018	Data Networks 1	(6 UOC)
Science Core/Elective		(6 UOC)
Science Elective		(6 UOC)

Notes: The Core/Elective subject will be PHYS2999 for Science with a Physics major, COMP2011 or COMP2711 and COMP2041 for Computer Science, and is a free elective for either Science with a Mathematics major.

For a Science Major other than Computer Science, COMP1021 can be moved to Session 2 to enable a Session 1 elective to be taken.

MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

Year 3

Session One

ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3006	Electronics A	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)

Session Two

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
TELE3015	High Freq Electromagnetics	(3 UOC)
Science Elective		(6 UOC)

Year 4

Session One

FOUR Year 3 Science Electives	(24 UOC)

Session Two

ELEC3041	Real Time Engineering	(6 UOC)
THREE Year 3/4 Science Electives	(18 UOC)	

Note: It will be possible to delay/advance electives by 1 or more sessions to enable as flexible a choice as possible, providing the structure of the program (i.e units of credit in each session) is maintained, and that ultimately all required core and elective courses are taken.

Year 5

As for Year 4 of Program 3643.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Training Requirements

Each student is personally responsible for ensuring the completion of the full 60 days compulsory industrial training prescribed as part of the requirements for the award of the degree. Industrial training should be concurrent with enrolment and is best accumulated in the summer recesses at the end of Years 2 and 3, but must be completed by the end of Year 4.

Students should be involved in general work with professional engineers and take an active part in their work in the design of simple equipment, solving of engineering problems, or any other work which is relevant to the profession of engineering.

At the end of each period of employment every student must submit a report, typically 2000-3000 words, summarising the work done, the training received and including a description of the organisation of the company.

Industrial training will be assessed as a compulsory part of the course ELEC4011 Ethics and Electrical Engineering Practice. Students must complete the industrial training requirement in order to receive a completed assessment for this course.

Further Information

Computing Requirements

Information regarding recommended computing equipment for the courses offered by the School is available from the School Office or the School's computer resources website.

Guidelines for Substitution of Courses

For 'Guidelines for Substitution of Courses', please refer to the program entry for 3643 Telecommunications.

3646 Telecommunications/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Combined degree programs lead to the award of the Bachelor of Engineering in either Electrical Engineering or Telecommunications, combined with a Bachelor degree in Arts or Science (usually Computer Science, Mathematics or Physics). Students who are in the combined degrees program must maintain a Credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

These programs qualify candidates for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged.

All combined degree programs are administered by the School of Electrical Engineering and Telecommunications.

Program Structure

Year 1

As for Program 3643

Year 2

Session One

COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
MATH2111	Higher Several Variable Calculus	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Session Two

ELEC2032	Electronics and Systems	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)
TELE3018	Data Networks 1	(6 UOC)
Arts /Core/ Elective		(6 UOC)
Arts Elective		(6 UOC)

Note: The Elective/Core subject will be PHYS2999 for Science with a Physics major, COMP2011 or COMP2711 & COMP2041 for Computer Science, and is a free elective for either Science with a Mathematics major or Arts.

For Arts, or a Science Major other than Computer Science, COMP1021 can be moved to Session 2 to enable a Session 1 elective to be taken.

MATH2620 and MATH2111 may be taken at the ordinary level (MATH2520 and MATH2011).

Year 3

Session One

ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3006	Electronics A	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)

Session Two

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3017	Electrical Engineering Design	(6 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
TELE3015	High Freq Electromagnetics	(3 UOC)
Arts/Elective		(6 UOC)

Year 4

Session One

FOUR Year 3 Arts Electives	(24 UOC)

Session Two

ELEC3041	Real Time Engineering	(6 UOC)
THREE Year 3/4 Arts Electives		(18 UOC)

Note: It will be possible to delay/advance electives by 1 or more sessions to enable as flexible a choice as possible, providing the structure of the program (i.e. units of credit in each session) is maintained, and that ultimately all required core and elective courses are taken.

Year 5

As for Year 4 of Program 3643.

Academic Rules

For Arts, in addition to the BE course, students must complete 60 units of credit offered by the Arts faculty, comprising a major sequence within Arts.

General Education is not required for a combined degree program, with the exception of the BE MBiomedE program.

A mathematics major is not normally permitted for the BA. The BE BSc combined degree is more appropriate for this.

There will be a testamur for each part of a combined degree program.

Testamurs for the BE BA, the BE BSc and the BE MBiomedE are awarded at a single graduation ceremony.

3715 Telecommunications/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook. Information about the program structure can be found in the Online Handbook program entry for 3715 BE BCom under the area of specialisation Telecommunications.

3723 Telecommunications/Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

A Bachelor of Telecommunications degree in Electrical Engineering and a Master of Biomedical Engineering degree (BE MBiomedE) can both be completed in five years of concurrent study. Students must maintain a 65% Credit average to retain their enrolment in MBiomedE.

Program Structure

Year 1

Session One

BIOM1001	Professional Biomedical Studies	(3 UOC)
ELEC1011	Electrical Engineering 1	(6 UOC)
MATH1090	Discrete Mathematics for Electrical Engineers	(3 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

BIOM2010	Biomedical Engineering Practice	(3 UOC)
CHEM1817	Chemistry 1ME	(3 UOC)
COMP1091	Solving Problems with Software	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

Session One

BIOM9420	Clinical Laboratory Science	(6 UOC)
COMP2091	Computing 2	(6 UOC)
ELEC2031	Circuits and Systems	(3 UOC)
MATH2011	Several Variable Calculus	(6 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)

Session Two

ELEC1041	Digital Circuits	(6 UOC)
ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
TELE3018	Data Networks 1	(6 UOC)

And ONE of the following courses:

MATH2520	Complex Analysis	(3 UOC)
MATH2620	Higher Complex Analysis	(3 UOC)

Year 3**Session One**

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3006	Electronics A	(6 UOC)
ELEC4010	Project Management for Professional Services	(3 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)
TELE4352	Data Networks 2	(6 UOC)

Session Two

ELEC3017	Electrical Engineering Design	(6 UOC)
ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)
TELE3015	High Freq Electromagnetics	(3 UOC)
One Biomedical Elective		(6 UOC)

Year 4**Session One**

BIOM9430	Electromedical Standards	(6 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
One Electrical Engineering Elective from Stage 3 List		(6 UOC)

Session Two

BIOM5910	Thesis Part A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)
TELE4354	Network Management	(6 UOC)
General Education		(6 UOC)

Year 5**Session One**

BIOM5911	Thesis Part B	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)
One Biomedical Engineering Elective		(6 UOC)
One Biomedical Engineering		(6 UOC)
or		(6 UOC)
One Electrical Professional Elective		(6 UOC)

Year 5**Session Two**

BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)
ONE of the following options:		
BIOM9913	Project Report	(12 UOC)
or		
Two Biomedical Electives		(12 UOC)
Plus One Biomedical Engineering Elective		(6 UOC)

Preferred Biomedical Engineering Electives**Session One**

BIOM9613	Medical Instrumentation	(6 UOC)

Session Two

BIOM9027	Medical Imaging	(6 UOC)
BIOM9440	Biomedical Practical Measures	(6 UOC)

Other Biomedical Engineering Electives**Session One**

BIOM9060	Biomedical Systems Analysis	(6 UOC)
BIOM9510	Introductory Biomechanics	(6 UOC)
BIOM9601	Biomedical Applications of Microcomputers 1	(6 UOC)
BIOM9701	Dynamics of the Cardiovascular System	(6 UOC)
SESC9451	Experimental Biomechanics	(6 UOC)

Session Two

ANAT2511	Fundamentals of Anatomy	(6 UOC)
BIOM9311	Mass Transfer in Medicine	(6 UOC)
BIOM9321	Physiological Fluid Mechanics	(6 UOC)
BIOM9332	Biocompatibility	(6 UOC)
BIOM9450	Clinical Information Systems	(6 UOC)
BIOM9541	Mechanics of the Human Body	(6 UOC)

BIOM9551	Biomechanics of Physical Rehabilitation	(6 UOC)
BIOM9561	Mechanical Properties of Biomaterials	(6 UOC)

Electrical Engineering & Telecommunications Stage 3 Elective List**Electronics**

ELEC3016	Electronics B	(6 UOC)

Energy Systems

ELEC3015	Electric Energy 2	(6 UOC)

Control

ELEC3014	Systems and Control 1	(6 UOC)
ELEC3041	Real Time Engineering	(6 UOC)

Telecommunications

TELE3013	Telecommunication Systems 1	(6 UOC)
TELE3018	Data Networks 1	(6 UOC)

Computer Systems

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Electrical Engineering & Telecommunications Professional Electives**Electronics**

ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)
ELEC4532	Integrated Digital Systems	(6 UOC)

Control

ELEC4412	Control of Continuous-time Systems	(6 UOC)
ELEC4413	Control of Discrete-time Systems	(6 UOC)

Energy Systems

ELEC4205	Electrical Energy Systems	(6 UOC)
ELEC4216	Electrical Drive Systems	(6 UOC)
ELEC4240	Power Electronics	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)

Signal Processing

ELEC4042	Signal Processing 2	(6 UOC)
ELEC4483	Biomedical Instrumentation, Measurement and Design	(6 UOC)

Business Administration

ELEC4444	New Business Creation	(6 UOC)

Telecommunications

TELE4313	Optical Communications	(6 UOC)
TELE4323	Digital Modulation and Coding	(6 UOC)
TELE4333	Wireless Data Communication Systems	(6 UOC)
TELE4343	Source Coding and Compression	(6 UOC)
TELE4352	Data Networks 2	(6 UOC)
TELE4353	Mobile and Satellite Communication Systems	(6 UOC)
TELE4354	Network Management	(6 UOC)
TELE4363	Telecommunications Systems 2	(6 UOC)

Computer Systems

COMP3111	Software Engineering	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3231	Operating Systems	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
MATH3411	Information, Codes and Ciphers	(6 UOC)

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Electrical Engineering and Telecommunications for more information.

3634 Photonic Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This combined degree program leads to the award of the Bachelor of Engineering in Photonic Engineering, combined with a Bachelor degree in Science (usually Computer Science, Mathematics or Physics). Students who are in the combined degrees program must maintain a Credit average performance (i.e. 65% weighted average mark) in order to stay in the program.

These programs qualify candidates for the award of two degrees in five years of combined full-time study in which the requirements of the degrees have been merged.

Program Structure**Year 1****Session One**

ELEC1011	Electrical Engineering 1	(6UOC)
MATH1090	Discrete Maths for Elec Eng	(3UOC)
PHTN1010	Intro to Photonics	(3UOC)
PHYS1131	Higher Physics 1A	(6UOC)

And one of the following courses:

MATH1131	Mathematics 1A	(6UOC)
MATH1141	Higher Mathematics 1A	(6UOC)

Session Two

COMP1091	Solving Problems with Software	(6UOC)
ELEC1041	Digital Circuits	(6UOC)
PHYS1231	Higher Physics 1B	(6UOC)

And one of the following courses:

MATH1231	Mathematics 1B	(6UOC)
MATH1241	Higher Mathematics 1B	(6UOC)

Year 2**Session One**

COMP2091	Computing 2	(6UOC)
ELEC2031	Circuits and Systems	(3UOC)
MATH2859	Prob. Stats and Information	(3UOC)
PHYS2030	Laboratory A	(3UOC)
PHYS2040	Quantum Physics	(3UOC)

And one of the following courses:

MATH2011	Several Variable Calculus	(6UOC)
MATH2111	Higher Severable Variable Calc	(6UOC)

Session Two

ELEC2032	Electronics and Systems	(3UOC)
MATH2130	Higher Math Methods for DEs	(3UOC)
MATH2509	Linear Algebra for Engineers	(3UOC)
PHYS2050	Electromagnetism	(3UOC)

Plus two Science Core Courses 6 UOC, totalling 12 UOC

Year 3**Session One**

ELEC2042	Real Time Instrumentation	(3UOC)
ELEC3006	Electronics A	(6UOC)
PHYS3030	Electromagnetism (Advanced)	(3UOC)
PHYS3770	Laser and Spectroscopy Lab	(3UOC)

And one of the following courses:

MATH2520	Complex Analysis	(3UOC)
MATH2620	Higher Complex Analysis	(3UOC)

Plus one Science Elective (6 UOC)

Session Two

ELEC3004	Signal Processing & Transform	(6UOC)
ELEC3017	Electrical Engineering Design	(6UOC)
PHYS3060	Advanced Optics	(3UOC)
PHYS3310	Physics of Solid State Devices	(3UOC)
Plus one 3 rd Year Electrical Engineering Elective		(6UOC)

Year 4**Session One**

Four Year 3 Science Electives 6 UOC each, totaling 24 UOC

Session Two

TELE3013	Telecommunications Systems 1	(6UOC)
Plus one Year 3 Science Elective		(6UOC)
Plus two Science Electives 6 UOC, totalling 12 UOC		

Year 5**Session One**

ELEC4010	Project Mgt for Pro. Services	(3UOC)
PHYS4979	Photonic Devices	(6UOC)
TELE4313	Optical Communications	(6UOC)

And one of the following courses:

ELEC4910	Thesis Part A	(3UOC)

ELEC4914	Group Thesis Part A	(3UOC)
Plus one Electrical Engineering Professional Elective		(6 UOC)

Session Two

ELEC4011	Ethics & Elec. Eng. Practice	(3UOC)

And one of the following courses:

ELEC4911	Thesis Part B	(9UOC)
ELEC4915	Group Thesis Part B	(9UOC)

Plus two Electrical Engineering Professional Electives 6 UOC each, totaling 12 UOC

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3715 Photonic Engineering/Bachelor of Commerce**BE BCom**

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook. Information about the program structure can be found in the Online Handbook program entry for 3715 BE BCom under the area of specialisation Photonic Engineering.

Fast Track Programs with Master of Engineering Science**3640 Electrical Engineering/Master of Engineering Science – Plan ELECD13640**

Bachelor of Engineering Master of Engineering Science BE MEng Sc

3643 Telecommunications/Master of Engineering Science – Plan TELED13643

Bachelor of Engineering Master of Engineering Science BE MEng Sc

Students may undertake a 4.5 years (10 semesters) full-time fast-track program leading to the awards of a Bachelor of Engineering and a Master of Engineering Science in Electrical Engineering or Telecommunications.

Students undertake the first three years (6 semesters) of the BE program in Electrical Engineering or Telecommunications. Subject to satisfying a minimum performance over these three years (see Rules for progression and the Award of Degrees), they (a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year; (b) undertake a 12 units of credit of project/thesis work over the Summer (9th) semester; and (c) undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

School of Mechanical and Manufacturing Engineering (incorporating Aerospace Engineering, Mechatronic Engineering and Naval Architecture)

Head of School: Professor H Kaebernick

Executive Assistant to Head of School: Associate Professor P Mathew

Administrative Officer: Mrs G Jance

The School offers a Bachelor of Engineering program with plans in Aerospace Engineering, Manufacturing Engineering and Management, Mechanical Engineering, Mechatronic Engineering and Naval Architecture. Also offered are combined degree programs with Science or Arts, and Bachelor/Master degree programs with Biomedical Engineering or Engineering Science.

No formal part-time programs are offered by the School. However, it is possible for students to undertake studies with a reduced load of courses. Students intending to take a reduced load are advised that very few undergraduate courses are offered in the evening.

Summary of Programs and Plans

The plans under program 3710, which lead to the award of the degree of Bachelor of Engineering (BE), are designed to provide the appropriate academic training for the professional engineer in the fields of Aerospace Engineering, Manufacturing Engineering and Management, Mechanical Engineering, Mechatronic Engineering and Naval Architecture. The first two years of these plans are identical, whilst the third and fourth years of the plans contain a number of common courses. Elective courses provide for a limited degree of specialisation in the fourth year of the Mechanical Engineering and Mechatronic Engineering plans. The Aerospace Engineering, Manufacturing Engineering and Management, and Naval Architecture plans do not have elective components. Each student is required to submit a thesis at the end of the final year and to present a seminar on the topic of the thesis.

The School also offers combined programs with Science (3711) or Arts (3712) leading to the award of the degrees of Bachelor of Engineering and Bachelor of Science (BE BSc) and Bachelor of Engineering and Bachelor of Arts (BE BA) respectively. These combined programs enable students to major in the areas of Computer Science, Materials Science, Mathematics, Physics, Statistics or another relevant field, in addition to studying their chosen Engineering plan.

The School, in addition, offers combined programs with Commerce (3715) under the faculty with the following areas of specialisations – Manufacturing Engineering and Management, Mechanical Engineering and Mechatronic Engineering, leading to the award of the degrees of Bachelor of Engineering and Bachelor of Commerce. For rules for progression in this program, the student's attention is directed to the 'Faculty Rules of Progression' for program 3715 contained in this Handbook.

Bachelor/Masters programs are also available. After five years of study, Mechanical and Mechatronic Engineering students may obtain a Bachelor of Engineering/Master of Biomedical Engineering (BE MBiomedE) degree. After four and a half years of study, Manufacturing Engineering and Management, Mechanical Engineering and Mechatronic Engineering students may obtain a Bachelor of Engineering/Master of Engineering Science (BE MEngSc) degree.

Industrial Experience

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete a total of 60 working days of industrial experience. A written report describing this experience is a requirement to passing the common, fourth year course MECH4001, Communications for Professional Engineers.

Recognition

The Institution of Engineers, Australia, recognises the degree of BE in any of the undergraduate programs offered by the School as meeting the examination requirements for admission to graduate and corporate membership. Substantial or complete recognition is accorded to the BE degree programs by overseas engineering institutions.

The award of the BE degree in Aerospace Engineering is recognised by the Royal Aeronautical Society as giving exemption from the formal examination requirements for corporate membership. Advancement from graduate membership to associate membership grade is awarded on a case by case basis after a further period of some years of professional experience.

The award of the BE degree in Naval Architecture is recognised by the Royal Institution of Naval Architects (RINA), London, as the academic qualification for corporate membership of that body.

Program Progression Guidelines

The student's attention is directed to the 'Faculty Rules for Progression' under "Rules for Progression and Award of Degrees" in this Handbook. In addition, the following points should be noted:

A student who is faced with compiling a timetable comprising courses from two academic years must give preference to courses from the lower year.

General Education

For students taking the Manufacturing Engineering and Management plan, the accounting courses GENC1001, GENC1002 or GENC1003 should not be chosen as they partially duplicate core course ACCT9003.

Thesis Arrangements

- The course MECH4001 Communications for Professional Engineers must only be taken in conjunction with either MECH4003 Thesis A or MECH4004 Thesis B.

- MECH4003 and MECH4004 must be undertaken in two consecutive sessions which are the final two sessions of candidature.
- A student must not be enrolled in more than 24 units of credit in any session involving MECH4003 and MECH4004.
- A single thesis project is commenced in MECH4003 and completed in MECH4004. MECH4004 carries the mark for the thesis project.
- MECH4003 is graded satisfactory (SY)/ failure (FN). If a student receives a failure (FN) in MECH4003, a student cannot proceed with MECH4004.
- If the project is abandoned during MECH4004, or if MECH4004 is failed, then the satisfactory (SY) for MECH4003 is changed to failure (FN). To complete the degree, a completely new topic must be chosen and the student must enrol again in both MECH4003 and MECH4004. (For BE MBiomedE students, read BIOM5001 instead of MECH4003 and BIOM5002 instead of MECH4004)

Programs and Plans

UNSW terminology uses the concept of "plans" within "programs". Most students are in one plan within a program. For example, a BE mechanical engineering student in program 3710 is in plan MECHA13710. The fifth character "A" indicates the "standard" plan. Other examples are:

BE Aerospace Engineering
AEROA13710

BE Mechatronic Engineering
MTRNA13710.

Combined degree BE BA and BE BSc students and BE MBiomedE students are in two plans simultaneously throughout their five years; one engineering and the other arts, science or biomedical engineering respectively. For example:

BE Manufacturing Engineering/BA French major
MANFA13712 and FRENA13712

BE Naval Architecture/BSc Physics major
NAVLA13711 and PHYSA13711

BE Mechatronic Engineering/MBiomedE
MTRNA13688 and BIOMA13688.

The BE degree is only completed after five years.

BE MEngSc students are in the standard single degree plan and program for the first three years. In fourth year they transfer to a special plan within the same program. For example:

BE Mechatronic Engineering/MEngSc
MTRNA13710 (Years 1–3), MTRNL13710 (Year 4).

The BE degree is completed after four years. In fifth year they transfer to the appropriate postgraduate program described in the Postgraduate Handbook.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3710 Bachelor of Engineering BE

Aerospace Engineering (plan AEROA13710)

Manufacturing Engineering and Management (plan MANFA13710)

Mechanical Engineering (plan MECHA13710)

Mechatronic Engineering (plan MTRNA13710)

Naval Architecture (plan NAVLA13710)

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The plans under program 3710, which lead to the award of the degree of Bachelor of Engineering (BE), are designed to provide the appropriate academic training for the professional engineer in the fields of Aerospace Engineering, Manufacturing Engineering and Management, Mechanical

Engineering, Mechatronic Engineering and Naval Architecture. The first two years of these plans are identical whilst the third and fourth years of the plans contain a number of common courses. Elective courses provide for a limited degree of specialisation in the fourth year of the Mechanical Engineering and Mechatronic Engineering plans. The Aerospace Engineering, Manufacturing Engineering and Management, and Naval Architecture plans do not have elective components. Each student is required to submit a thesis at the end of the final year and to deliver a seminar on the topic of the thesis.

The School also offers combined programs with Science, 3711, Arts, 3712 or Commerce, 3715, leading to the award of the degrees of Bachelor of Engineering and Bachelor of Science (BE BSc), Bachelor of Engineering and Bachelor of Arts (BE BA) or Bachelor of Engineering and Bachelor of Commerce (BE BCom) respectively. These combined programs enable students to major in the area of computer science, materials science, mathematics, physics, statistics, commerce or another relevant field, in addition to studying their chosen engineering plan.

Bachelor/Masters programs are also available. After five years of study, Mechanical and Mechatronic Engineering students may obtain Bachelor of Engineering/Master of Biomedical Engineering (BE MBiomedE) degrees. After four and a half years of study, Manufacturing Engineering and Management, Mechanical Engineering and Mechatronic Engineering students may obtain Bachelor of Engineering/Master of Engineering Science (BE MEngSc) degree.

Programs and Plans

The University's New South Solutions computer software uses the concept of "plans" within "programs". Most students are in one plan within a program. For example, a BE mechanical engineering student in program 3710 is in plan MECHA13710. The fifth character "A" indicates the "standard" plan. Other examples are: BE Aerospace engineering AEROA13710; BE Manufacturing Engineering and Management MANFA13710; BE Mechatronic Engineering MTRNA13710; BE Naval Architecture NAVLA13710.

Double degree BE BA, BE BSc and BE MBiomedE students are in two plans simultaneously throughout their five years; one engineering and the other arts, science or biomedical engineering respectively. For example

BE Manufacturing Engineering/BA French major
MANFA13712 and FRENA13712

BE Naval Architecture/BSc Physics major
NAVLA13711 and PHYSA13711

BE Mechatronic Engineering/MBiomedE
MTRNA13688 and BIOMA13688

The BE degree is only completed after five years.

Double degree BE MEngSc students are in the standard degree plan and program for the first three years. In fourth year they transfer to a special plan within the same program. For example:

BE Mechatronic Engineering/MEngSc MTRNA13710 (years 1-3),
MTRNL13710 (year 4).

The BE degree is completed after four years. In fifth year they transfer to the appropriate postgraduate program described in the Postgraduate Handbook.

Program Structure

Year 1

Year 1 of all plans

CHEM1817	Chemistry 1ME	(3 UOC)
MANF1130	Introduction to Manufacturing	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MATS9520	Engineering Materials	(3 UOC)
MECH1120	Design and the Engineering Profession	(3 UOC)
MECH1300	Engineering Mechanics 1	(6 UOC)
MECH1400	Mechanics of Solids 1	(6 UOC)
MECH1500	Computing 1M	(3 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

Year 2

Year 2 of all plans

ELEC0807	Electrical Engineering 1E	(6 UOC)
MATH2029	Engineering Mathematics 2A	(6 UOC)
MATH2039	Engineering Mathematics 2B	(3 UOC)
MATH2839	Statistics SM	(3 UOC)
MECH2101	Machine Design A	(3 UOC)
MECH2102	Machine Design B	(3 UOC)

MECH2300	Engineering Mechanics 2	(3 UOC)
MECH2411	Mechanics of Solids 2A	(3 UOC)
MECH2412	Mechanics of Solids 2B	(3 UOC)
MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)
MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)
General Education Elective		(3 UOC)

Aerospace Engineering (plan AEROA13710)

Years 3 and 4

The Aerospace Engineering plan covers the analysis, design and operation of aircraft and spacecraft. Graduates work mainly on the design and manufacture of flight vehicles, their operation with major or satellite airlines and research for civil and military aerospace organisations. Owing to the international nature of the aerospace industry, the topics studied cover a similar area and, in general, to the same depth of understanding as professional training programs in aerospace in other industrial countries. The aerospace industry is one of Australia's major exporters of high value added manufactured goods.

The Faculty has approved an arrangement whereby students who satisfy the requirements of the first two years of a Mechanical Engineering four year degree program at any Australasian tertiary institution may be admitted to Years 3 and 4 of the plan leading to the Bachelor of Engineering degree in Aerospace Engineering. The proviso is that the Head of the School is satisfied that the courses studied at the other institution are equivalent and gives their recommendation.

		HPW		UOC
		S1	S2	
Year 3				
AERO3101	Aerospace Design 1A	3	-	3
AERO3102	Aerospace Design 1B	-	3	3
AERO3400	Analysis of Aerospace Structures 1	-	3	3
AERO3610	Aerodynamics and Propulsion	-	6	6
AERO3620	Flight Dynamics and Systems	3	-	3
MECH3000	Professional Responsibilities	-	3	3
MECH3203	Engineering Experimentation A	2	-	3
MECH3211	Linear Systems Analysis	3	-	3
MECH3330	Vibration Analysis	-	3	3
MECH3400	Mechanics of Solids 3	3	-	3
MECH3520	Programming and Numerical Methods	3	-	3
MTRN3212	Principles of Control	-	3	3
	General Education Elective	2	-	3
	General Education Elective	2	-	3
	General Education Elective	-	2	3
Year 4				
AERO4101	Aerospace Design 2A	3	-	3
AERO4102	Aerospace Design 2B	-	3	3
AERO4401	Analysis of Aerospace Structures 2A	3	-	3
AERO4402	Analysis of Aerospace Structures 2B	-	3	3
AERO4610	Advanced Aerodynamics and Propulsion	6	-	6
AERO4620	Aerospace Vehicle Dynamics and Avionics	-	6	6
MANF4430	Management for Engineers	6	-	6
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9

Manufacturing Engineering and Management (plan MANFA13710)

Years 3 and 4

The Manufacturing Engineering and Management plan is designed for students with engineering ability whose interests lie in the planning, development and control of manufacturing or service operations.

In the Manufacturing Engineering and Management courses, the problems associated with the practical economics of manufacturing operations are stressed. The aim is to provide students with the education necessary to carry out an industrial job and to examine it critically in the light of economic efficiency.

Traditional engineering programs do not embrace the problems which are characteristic of Manufacturing Engineering and Management. These problems include the analysis of a product to ensure satisfactory functioning with regard to methods and sequence of manufacturing operations; the disposition of buildings and of equipment within them to permit efficient handling of materials; the avoidance of bottlenecks; the related problems of quality and cost control, testing and inspection;

labour and personnel relations; and, finally, the problem of distribution and sales.

The financial and economic aspects are studied as the problem in manufacturing has not been solved until the final translation of the product into money has been accomplished successfully. While it is not intended to develop an expert in accounting practice or economics, it is intended to produce an engineer with an appreciation of the problems of cost and one who can apply considerations of ultimate economy to all industrial problems. The techniques of operations research may be applied here, where mathematical models of real-life situations are constructed and manipulated to yield optimal solutions as guides to management.

An engineer trained in Manufacturing Engineering and Management may initially be employed in any of the following major areas of industrial activity: industrial economic analysis; planning and control of production; product and process design; methods engineering; operations research.

		HPW		UOC
Year 3		S1	S2	
ACCT9003	Introduction to Accounting Principles	2	-	3
MANF3210	Product Manufacture	6	-	6
MANF3300	Design of Manufacturing Facilities 1	-	4	6
MANF3420	Industrial Experimentation	-	2	3
MANF3500	Computers in Manufacturing 1	-	3	3
MANF3601	Manufacturing Operations Analysis A	3	-	3
MANF3602	Manufacturing Operations Analysis B	-	3	3
MECH3000	Professional Responsibilities	-	3	3
MECH3211	Linear Systems Analysis	3	-	3
MTRN3212	Principles of Control	-	3	3
MTRN3530	Computing Applications in Mechanical Systems	3	-	3
	General Education Elective	2	-	3
	General Education Elective	2	-	3
	General Education Elective	-	2	3

		HPW		UOC
Year 4		S1	S2	
MANF4011	Analysis of Manufacturing Systems A	2	-	3
MANF4012	Analysis of Manufacturing Systems B	-	2	3
MANF4300	Design of Manufacturing Facilities 2	-	4	6
MANF4430	Management for Engineers	6	-	6
MANF4440	Strategic Manufacturing Management	3	-	3
MANF4500	Computers in Manufacturing 2	3	-	3
MANF4601	Computer Aided Production Management A	3	-	3
MANF4602	Computer Aided Production Management B	-	3	3
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9

Mechanical Engineering (plan MECHA13710)

Years 3 and 4

The Mechanical Engineering plan provides a versatile, comprehensive coverage of areas involving the conception and design of machinery and mechanical plant, the supervision of its construction, operation and maintenance, the planning and supervision of large engineering projects, and general engineering management. Due to its wide range, a number of options are provided as Technical Elective courses in the final year. These are preferentially linked to provide a direction appropriate to the needs of Australian industry and to the specific interests of students, although some flexibility is available if required. Typical fields which may be encompassed by the plan include building services, computer-aided design, power generation, energy and environmental systems, gas and liquid handling, bio-mechanics, materials handling, control systems, and transport. An emphasis is placed on the application of engineering science, development and management in these fields.

		HPW		UOC
Year 3		S1	S2	
MECH3000	Professional Responsibilities	-	3	3
MECH3101	Machine Systems Design A	3	-	3
MECH3102	Machine Systems Design B	-	3	3
MECH3203	Engineering Experimentation A	2	-	3
MECH3204	Engineering Experimentation B	-	2	3
MECH3211	Linear Systems Analysis	3	-	3
MECH3300	Engineering Mechanics 3	-	3	3
MECH3330	Vibration Analysis	-	3	3

MECH3400	Mechanics of Solids 3	3	-	3
MECH3520	Programming and Numerical Methods	3	-	3
MECH3601	Thermofluid System Design	3	-	3
MECH3602	Advanced Thermodynamics	-	3	3
MTRN3212	Principles of Control	-	3	3
	General Education Elective	2	-	3
	General Education Elective	2	-	3
	General Education Elective	-	2	3

Year 4

MANF4430	Management for Engineers	6	-	6
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9
	Technical Electives	6	-	12
	Technical Electives	-	6	12

Mechanical Engineering Technical Electives

24 units of credit of Technical Elective courses are required. They may be selected from the postgraduate list of courses of the School or from Years 3 and 4 courses from other plans run by the School. Prerequisite and corequisite requirements must be satisfied.

Approval is required for the selection of any course from outside the School.

Due to staff availability and to demand, it is likely that not all of the Technical Electives will be always on offer. Students are advised in November which Technical Electives will be offered in the following year.

Mechatronic Engineering (plan MTRNA13710)

Years 3 and 4

The Mechatronic Engineering plan provides the student with the ability to acquire a hybrid range of skills based on mechanics, electronics and computing. Whilst there is a comprehensive coverage of mechanical engineering and design areas, the plan enables a deeper understanding of the principles supporting the conception, design, construction, maintenance, integration and repair of intelligent machines. Typical examples of these machines are robots, white goods, cameras, automated test equipment and transport vehicles.

Typical fields which may be encompassed by the plan include building services, computer controlled plant, manufacturing, robotics and materials handling. An emphasis is placed on the application of engineering science, development and management in these fields.

		HPW		UOC
Year 3		S1	S2	
ELEC2042	Real Time Instrumentation	-	3	3
MECH3000	Professional Responsibilities	-	3	3
MECH3101	Machine Systems Design A	3	-	3
MECH3203	Engineering Experimentation A	2	-	3
MECH3204	Engineering Experimentation B	-	2	3
MECH3211	Linear Systems Analysis	3	-	3
MECH3300	Engineering Mechanics 3	-	3	3
MECH3330	Vibration Analysis	-	3	3
MECH3400	Mechanics of Solids 3	3	-	3
MTRN3201	Digital Logic for Mechatronics	3	-	3
MTRN3202	Microprocessor Control	-	3	3
MTRN3212	Principles of Control	-	3	3
MTRN3530	Computing Applications in Mechanical Systems	3	-	3
	General Education Elective	2	-	3
	General Education Elective	2	-	3
	General Education Elective	-	2	3

Year 4

MANF4430	Management for Engineers	6	-	6
MECH3601	Thermofluid System Design	3	-	3
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9
MTRN4221	Industrial Robotics	3	-	3
	Technical Elective	x	-	6
	Technical Electives	-	x	12

Mechatronic Engineering Technical Electives

18 units of credit of Technical Elective courses are required. It is recommended that they be primarily chosen from the Preferred Electives

List given below. Included must be at least one of COMP3111, COMP3331 or ELEC3041. However they may, with approval, be selected from the postgraduate list of courses of the School or from Years 3 and 4 courses from other undergraduate plans run by the School. Prerequisite and corequisite requirements must be satisfied.

Approval is required for the selection of any course from outside the School.

Due to staff availability and to demand, it is likely that not all of the Technical Electives listed will be always on offer. Students are advised in November which Technical Electives will be offered in the following year.

		HPW		UOC
Preferred Electives List		S1	S2	
COMP3111	Software Engineering	5 or 5		6
COMP3331	Computer Networks and Applications	5 or 5		6
ELEC3041	Real Time Engineering	-	4	6
MTRN9211	Modelling and Control of Mechatronic Systems	-	3	6
MTRN9222	Intelligent Machines	3	-	6
MTRN9223	Machine Condition Monitoring	3	-	6

Naval Architecture (plan NAVLA13710)

Years 3 and 4

Naval Architecture is the branch of engineering which is concerned with the design, building and utilisation of all types of ships and marine vehicles.

Naval architects must be conversant with a wide variety of skills, including most forms of engineering and architecture. This is because a ship or a boat must be a completely self-sufficient vehicle containing a number of systems and able to withstand the loads from the sea. Yachts, fishing boats, frigates, ferries, catamarans and pleasure craft are just a few of the types of vessels that are studied during the program.

The Faculty has approved an arrangement whereby students who satisfy the requirements of the first two years of a Mechanical Engineering four year degree program at any Australasian tertiary institution may be admitted to Years 3 and 4 of the program leading to the Bachelor of Engineering degree in Naval Architecture. The proviso is that the Head of the School is satisfied that the courses studied at the other institution are equivalent and gives their recommendation.

		HPW		UOC
Year 3		S1	S2	
MECH3000	Professional Responsibilities	-	3	3
MECH3211	Linear Systems Analysis	3	-	3
MECH3330	Vibration Analysis	-	3	3
MECH3400	Mechanics of Solids 3	3	-	3
MECH3520	Programming and Numerical Methods	3	-	3
MTRN3212	Principles of Control	-	3	3
NAVL3100	Principles of Ship Design	-	3	3
NAVL3110	Ship Practice	3	-	3
NAVL3400	Ship Structures 1	-	3	3
NAVL3603	Ship Hydromechanics A	6	-	6
NAVL3604	Ship Hydromechanics B	-	3	3
NAVL3700	Ship Propulsion	-	3	3
	General Education Elective	2	-	3
	General Education Elective	2	-	3
	General Education Elective	-	2	3

Year 4

MANF4430	Management for Engineers	6	-	6
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9
NAVL4101	Design of High-speed Craft	3	-	3
NAVL4102	Design of Yachts	-	3	3
NAVL4111	Ship Design Project A	3	-	3
NAVL4112	Ship Design Project B	-	3	3
NAVL4401	Ship Structures 2A	3	-	3
NAVL4402	Ship Structures 2B	-	3	3
NAVL4710	Ship Standards	3	-	3
NAVL4720	Marine Engineering	-	3	3

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours

will be awarded for meritorious performance over the program: Special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Program Progression Guidelines

The student's attention is directed to the 'Rules for Progression & the Award of Degrees' under 'Faculty Information and Assistance' in this Handbook. In addition, the following points should be noted:

A student who is faced with compiling a timetable comprising courses from two academic years must give preference to courses from the lower year.

Thesis Arrangements

- The course MECH4001 Communications for Professional Engineers must only be taken in conjunction with either MECH4003 Thesis A or MECH4004 Thesis B.
- MECH4003 and MECH4004 must be undertaken in two consecutive sessions which are the final two sessions of candidature.
- A student must not be enrolled in more than 24 units of credit in any session involving MECH4003 and MECH4004.
- A single thesis project is commenced in MECH4003 and completed in MECH4004. MECH4004 carries the mark for the thesis project.
- MECH4003 is graded satisfactory (SY)/ failure (FN). If a student receives a failure (FN) in MECH4003, a student cannot proceed with MECH4004.
- If the project is abandoned during MECH4004, or if MECH4004 is failed, then the satisfactory (SY) for MECH4003 is changed to failure (FN). To complete the degree, a completely new topic must be chosen and the student must enrol again in both MECH4003 and MECH4004. (For BE MBIomedE students, read BIOM5001 instead of MECH4003 and BIOM5002 instead of MECH4004)

Industrial Experience Requirements

Industrial experience is an integral part of the programs. This can be taken within Australia or overseas. Students must complete a total of sixty working days of industrial experience. A written report describing this experience is a requirement to passing the common, fourth year course MECH4001, Communications for Professional Engineers.

Professional Recognition

The Institution of Engineers, Australia, recognises the degree of BE in any of the undergraduate programs offered by the School as meeting the examination requirements for admission to graduate and corporate membership. Substantial or complete recognition is accorded to the BE degree programs by overseas engineering institutions.

The award of the BE degree in Aerospace Engineering is recognised by the Royal Aeronautical Society as giving exemption from the formal examination requirements for corporate membership. Advancement from graduate membership to associate membership grade is awarded on a case by case basis after a further period of some years of professional experience.

The award of the BE degree in Naval Architecture is recognised by the Royal Institution of Naval Architects (RINA), London, as the academic qualification for corporate membership of that body.

General Education

For students taking the Manufacturing Engineering and Management plan, the accounting courses GENC1001, GENC1002 or GENC1003 should not be chosen as they partially duplicate course ACCT9003.

3711 Bachelor of Engineering Bachelor of Science BE BSc

Aerospace Engineering (plan AEROA13711 + Science plan)

Manufacturing Engineering and Management (plan MANFA13711 + Science plan)

Mechanical Engineering (plan MECHA13711 + Science plan)

Mechatronic Engineering (plan MTRNA13711 + Science plan)

Naval Architecture (plan NAVLA13711 + Science plan)

Typical Duration

5 years

Minimum UOC for Award

240 units of credit with a minimum of 102 units of credit from Science Faculty

Typical UOC per Session

24 units of credit

Program Description

The combined degree program of five years full-time study enables a student to qualify for the degrees of Bachelor of Engineering and Bachelor of Science (BE BSc). Every session of the program contains only the standard 24 Units of Credit of courses and hence workload should not be greater than in a single degree program. The combined degree program is administered by the School of Mechanical and Manufacturing Engineering.

For the Bachelor of Science the student selects a second plan based on an approved major sequence of courses. A major sequence is defined to comprise 42 Units of Credit of courses at Levels 2 and 3 with at least 18 Units of Credit being at Level 3. Overall, in the combined degree program, at least 84 units of credit must be taught by Science.

In some BSc majors, science courses specific to engineering degrees, e.g. PHYS1169 Physics 1CME, MATH2029 Engineering Mathematics 2A, will be exchanged for courses within that major.

The general layout for the combined degree is given below. Detailed outlines for each combination of engineering and science are available from the School.

Students who commence the program and do not complete the Engineering component may take out a BSc degree on completion of all Science requirements. Similarly, students not wishing to complete the BSc degree, may transfer to a plan under the single degree Engineering program and be given appropriate credit for courses satisfactorily completed.

Plans within this program:

Aerospace Engineering (plan AEROA13711 + Science plan)

Manufacturing Engineering and Management (plan MANFA13711 + Science plan)

Mechanical Engineering (plan MECHA13711 + Science plan)

Mechatronic Engineering (plan MTRNA13711 + Science plan)

Naval Architecture (plan NAVLA13711 + Science plan)

Program Structure

Year 1

CHEM1817	Chemistry 1ME	(3 UOC)
MANF1130	Introduction to Manufacturing	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MATS9520	Engineering Materials	(3 UOC)
MECH1120	Design and the Engineering Profession	(3 UOC)
MECH1500	Computing 1M	(3 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)
Plus 12 units of credits of Science courses		

Year 2

MATH2029	Engineering Mathematics 2A	(6 UOC)
MATH2039	Engineering Mathematics 2B	(3 UOC)
MATH2839	Statistics SM	(3 UOC)
MECH1300	Engineering Mechanics 1	(6 UOC)
MECH1400	Mechanics of Solids 1	(6 UOC)
MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)

MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)

Plus 12 units of credit of Science courses.

Year 3

ELEC0807	Electrical Engineering 1E	(6 UOC)
MECH2101	Machine Design A	(3 UOC)
MECH2102	Machine Design B	(3 UOC)
MECH2300	Engineering Mechanics 2	(3 UOC)
MECH2411	Mechanics of Solids 2A	(3 UOC)
MECH2412	Mechanics of Solids 2B	(3 UOC)
MECH3000	Professional Responsibilities	(3 UOC)

Plus 24 units of credit of Science courses.

Year 4

S1 Year 3 engineering plan, less 6 units of credit General Education Plus 6 units of credit Science courses	(18 UOC)

S2 Year 3 engineering plan, less General Education & MECH3000 Professional Responsibilities Plus 6 units of credit Science course	(18 UOC)

Year 5

S1 Year 4 engineering plan 24 units of credit.

S2 Year 4 engineering plan 24 units of credit.

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3712 Bachelor of Engineering Bachelor of Arts BE BA

Aerospace Engineering (plan AEROA13712 + Arts plan)

Manufacturing Engineering and Management (plan MANFA13712 + Arts plan)

Mechanical Engineering (plan MECHA13712 + Arts plan)

Mechatronic Engineering (plan MTRNA13712 + Arts plan)

Naval Architecture (plan NAVLA13712 + Arts plan)

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program students can add their choice of an Arts plan to a professionally accredited engineering plan in Aerospace Engineering, Manufacturing Engineering and Management, Mechanical Engineering, Mechatronic Engineering or Naval Architecture. Thus every session of the combined degree program contains only the standard 24 Units of Credit of courses and hence the workload should not be greater than in a single degree program. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program later, although with late transfer it might not be possible to complete the course in minimum time. In this case the student will have to prescribe their own engineering plan following discussion with the School. The full range of Arts plans is available.

Because the Engineering and Arts plans have common content, such as mathematics and physics, only one more year of study is required to gain the additional qualification of Bachelor of Arts.

Program Objectives and Learning Outcomes

Please contact the School of Mechanical & Manufacturing Engineering and the Faculty of Arts for information on the Program Objectives and Learning Outcomes.

Program Structure

Plans within this program:

Aerospace Engineering (plan **AEORA13712** + Arts plan)
Manufacturing Engineering and Management (plan **MANFA13712** + Arts plan)
Mechanical Engineering (plan **MECHA13712** + Arts plan)
Mechatronic Engineering (plan **MTRNA13712** + Arts plan)
Naval Architecture (plan **NAVLA13712** + Arts plan)

Academic Rules

Eligibility

Anyone who meets the entry requirements for both Engineering and Arts is eligible for the combined program.

Rules

1. In addition to their chosen engineering plan, students must complete a major sequence approved arts plan containing at least 60 units of credit of courses.

Mathematics majors are not usually permitted. BE BSc combined degrees are more appropriate for this.

2. There will be a testamur for each part of the combined degree program.

3. Students who complete the BE program first may proceed to graduation with the degree of Bachelor of Engineering in the usual way provided they have also completed 12 Units of Credit in General Education.

Further Information

Organisation

The BE BA program is administered by the School of Mechanical and Manufacturing Engineering.

Students should start discussing their program with representatives of the School and the Faculty of Arts and Social Sciences as soon as possible - preferably well before enrolment. Enquiries should be directed to the Executive Assistant to the Dean of the Faculty of Arts and Social Sciences.

Students should work out for themselves the arts program they would like to add to their chosen engineering plan. The Arts and Social Sciences Faculty section in this Handbook describes the options, and the School of Mechanical and Manufacturing Engineering can supply sample plans showing what previous students have arranged. Although the Arts and Social Sciences Faculty section in this Handbook lists courses from the Faculties of Engineering and Science, it is not permissible for BE BA students to include these courses.

There are no special rules on what to include in each year. Students should schedule the arts and engineering components to suit their preferences while meeting the constraints of timetables and prerequisites. The sample plans can help here too.

The Arts component must be approved by the Faculty of Arts and Social Sciences.

The final program and schedule must be approved by the School.

3715 Mechanical, Manufacturing or Mechatronic Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

3683 Mechanical Engineering/ Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBiomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

A Bachelor of Engineering degree in Mechanical Engineering and a Master of Biomedical Engineering degree (BE MBiomedE) can both be completed in five years of concurrent study.

Program Structure

Biomedical Engineering Electives

For a full list of Biomedical Engineering Electives, refer to the Graduate School of Biomedical Engineering in the Postgraduate Handbook.

Year 1

BIOM1001	Professional Biomedical Studies	(3 UOC)
BIOM2010	Biomedical Engineering Practice	(3 UOC)
CHEM1817	Chemistry 1ME	(3 UOC)
MANF1130	Introduction to Manufacturing	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MECH1120	Design and the Engineering Profession	(3 UOC)
MECH1300	Engineering Mechanics 1	(6 UOC)
MECH1400	Mechanics of Solids 1	(6 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

Year 2

BIOM9420	Clinical Laboratory Science	(6 UOC)
ELEC0807	Electrical Engineering 1E	(6 UOC)
MATH2029	Engineering Mathematics 2A	(6 UOC)
MATH2039	Engineering Mathematics 2B	(3 UOC)
MATH2839	Statistics SM	(3 UOC)
MATS9520	Engineering Materials	(3 UOC)
MECH1500	Computing 1M	(3 UOC)
MECH2411	Mechanics of Solids 2A	(3 UOC)
MECH2412	Mechanics of Solids 2B	(3 UOC)
MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)
MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)

Year 3

ANAT2511	Fundamentals of Anatomy	(6 UOC)
MECH2101	Machine Design A	(3 UOC)
MECH2102	Machine Design B	(3 UOC)
MECH2300	Engineering Mechanics 2	(3 UOC)
MECH3203	Engineering Experimentation A	(3 UOC)
MECH3204	Engineering Experimentation B	(3 UOC)
MECH3211	Linear Systems Analysis	(3 UOC)
MECH3300	Engineering Mechanics 3	(3 UOC)
MECH3330	Vibration Analysis	(3 UOC)
MECH3520	Programming & Numerical Methods	(3 UOC)
MECH3601	Thermofluid System Design	(3 UOC)
MECH3602	Advanced Thermodynamics	(3 UOC)
MTRN3212	Principles of Control	(3 UOC)
1 Biomedical Engineering Elective		(6 UOC)

Year 4

BIOM5001	Thesis Part A	(6 UOC)
MANF4430	Management for Engineers	(6 UOC)
MECH3101	Machine Systems Design A	(3 UOC)
MECH3102	Machine Systems Design B	(3 UOC)
MECH3400	Mechanics of Solids 3	(3 UOC)
MECH4001	Communications for Professional Engineers	(3 UOC)
PHPH2121	Principles of Physiology A	(6 UOC)
PHPH2221	Principles of Physiology B	(6 UOC)
1 Biomedical Engineering Elective		(6 UOC)
1 Mechanical Engineering Technical		(6UOC)

Year 5

BIOM5002	Thesis Part B	(9 UOC)
BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)
MECH3000	Professional Responsibilities	(3 UOC)
Biomedical Engineering Electives		(24 UOC)
General Education Electives		(6 UOC)

Masters Thesis

Masters Thesis BIOM9913 Project Report can be taken instead of 12 UOC of Biomedical Engineering Electives.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 6 UOC taken in the final year of studies.

Each Faculty has responsibility for deciding what courses are able to be counted towards the General Education requirement for their students. The Faculty of Engineering is committed to providing the widest range of choice of general education electives for its students. It strongly encourages students to make the best use of this flexibility. Please contact

your School Office for further information on General Education electives available to you.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Mechanical and Manufacturing Engineering for more information.

3688 Mechatronic Engineering/Master of Biomedical Engineering

Bachelor of Engineering Master of Master of Biomedical Engineering BE MBIomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

A Bachelor of Engineering degree in Mechatronic Engineering and a Master of Biomedical Engineering degree (BE MBIomedE) can both be completed in five years of concurrent study.

Program Structure

Year 1

BIOM1001	Professional Biomedical Studies	(3 UOC)
BIOM2010	Biomedical Engineering Practice	(3 UOC)
CHEM1817	Chemistry 1ME	(3 UOC)
MANF1130	Introduction to Manufacturing	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MECH1120	Design and the Engineering Profession	(3 UOC)
MECH1300	Engineering Mechanics 1	(6 UOC)
MECH1400	Mechanics of Solids 1	(6 UOC)
PHYS1169	Physics 1 (Chem,Mech,Min Eng)	(6 UOC)

Year 2

BIOM9420	Clinical Laboratory Science	(6 UOC)
ELEC0807	Electrical Engineering 1E	(6 UOC)
MATH2029	Engineering Mathematics 2A	(6 UOC)
MATH2039	Engineering Mathematics 2B	(3 UOC)
MATH2839	Statistics SM	(3 UOC)
MATS9520	Engineering Materials	(3 UOC)
MECH1500	Computing 1M	(3 UOC)
MECH2411	Mechanics of Solids 2A	(3 UOC)
MECH2412	Mechanics of Solids 2B	(3 UOC)
MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)
MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)

Year 3

ANAT2511	Fundamentals of Anatomy	(6 UOC)
MECH2101	Machine Design A	(3 UOC)
MECH2102	Machine Design B	(3 UOC)
MECH2300	Engineering Mechanics 2	(3 UOC)
MECH3203	Engineering Experimentation A	(3 UOC)
MECH3204	Engineering Experimentation B	(3 UOC)
MECH3211	Linear Systems Analysis	(3 UOC)
MECH3300	Engineering Mechanics 3	(3 UOC)
MECH3330	Vibration Analysis	(3 UOC)
MTRN3201	Digital Logic for Mechatronics	(3 UOC)
MTRN3202	Microprocessor Control	(3 UOC)
MTRN3212	Principles of Control	(3 UOC)
MTRN3530	Computing Applcts in Mech.Sys.	(3 UOC)
	Biomedical Engineering Elective	(6 UOC)

Year 4

BIOM5001	Thesis Part A	(6 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MANF4430	Management for Engineers	(6 UOC)
MECH3101	Machine Systems Design A	(3 UOC)

MECH3400	Mechanics of Solids 3	(3 UOC)
MECH3601	Thermofluid System Design	(3 UOC)
MECH4001	Communications for Professional Engineers	(3 UOC)
MTRN4221	Industrial Robotics	(3 UOC)
PHPH2121	Principles of Physiology A	(6 UOC)
PHPH2221	Principles of Physiology B	(6 UOC)
	Biomedical Engineering Elective	(6 UOC)

Year 5

BIOM5002	Thesis Part B	(9 UOC)
BIOM9410	Regulatory Req of Biomed Tech	(6 UOC)
BIOM9613	Medical Instrumentation	(6 UOC)
MECH3000	Professional Responsibilities	(3 UOC)
	Biomedical Engineering Electives	(12 UOC)
	Mtrn Technical Elective	(6 UOC)
	General Education Electives	(6 UOC)

Masters Thesis

Masters Thesis BIOM9913 Project Report can be taken instead of 12 UOC of Biomedical Engineering electives.

Biomedical Engineering Electives

For a full list of Biomedical Engineering Electives, refer to the Graduate School of Biomedical Engineering in the Postgraduate Handbook.

General Education Requirements

Students in this program need to satisfy the General Education requirements of 6 units of credit which is taken in the final of the studies. For further information, please refer to the General Education section in this Handbook.

Each Faculty has responsibility for deciding what courses are able to be counted towards the General Education requirement for their students.

The Faculty of Engineering is committed to providing the widest range of choice of general education electives for its students. It strongly encourages students to make the best use of this flexibility. Please contact your School Office for further information on General Education electives available to you.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Mechanical and Manufacturing Engineering for more information.

Fast-Track Program with Master of Engineering Science

3710 Bachelor of Engineering/8710 Master of Engineering Science

BE MEngSc

A Bachelor of Engineering degree in Manufacturing Engineering and Management, in Mechanical Engineering, or in Mechatronic Engineering, and a Master of Engineering Science degree (BE MEngSc) can both be completed in four and a half years of study.

Students undertake the first three years (6 sessions) of the standard BE plan in Manufacturing Engineering and Management, in Mechanical Engineering, or in Mechatronic Engineering. Subject to satisfying a minimum performance requirement over these three years (see below), they (a) substitute 12 units of credit of the standard Year 4 BE degree plan with 12 units of credit of approved postgraduate coursework in their fourth year, (b) they undertake 12 units of credit of project/thesis work over the Summer (9th) Session, and (c) they undertake 24 units of credit of postgraduate coursework in the 10th session (first half of their fifth year).

There will be a testamur for each degree. The degree of Bachelor of Engineering will be awarded on the satisfactory completion of the first eight sessions.

Admission Requirements

Admission to the BE MEngSc will require a credit grade average by the end of Year 3.

3710 Manufacturing Engineering and Management

Years 1, 2 and 3 (plan MANFA13710)

Students in Years 1 and 2 are enrolled in the standard single degree Manufacturing Engineering and Management plan MANFA13710 within program 3710.

Year 4 (plan MANFL13710)

In Year 4, students transfer to the special plan MANFL13710 within program 3710. Compared to the standard plan for Session 1 of Year 4, the postgraduate course MANF9471 Manufacturing Strategy is substituted for MANF4440 Strategic Manufacturing Management and for MANF4500 Computers in Manufacturing 2. In Session 2, the postgraduate course MANF9340 Factory Automation is substituted for MANF4300 Design of Manufacturing Facilities 2.

		HPW		UOC
		S1	S2	
MANF4011	Analysis of Manufacturing Systems A	2	-	3
MANF4012	Analysis of Manufacturing Systems B	-	2	3
MANF4430	Management for Engineers	6	-	6
MANF4601	Computer Aided Production Management A	3	-	3
MANF4602	Computer Aided Production Management B	-	3	3
MECH4001	Communications for Professional Engineers	-	3	3
MECH4003	Thesis A	0	-	6
MECH4004	Thesis B	-	0	9
MANF9340	Factory Automation	-	3	6
MANF9471	Manufacturing Strategy	3	-	6

8710 Manufacturing Engineering and Management

After Year 4, students, having completed their engineering program, change to MEngSc program 8710.

Summer Session between Year 4 and Year 5

Students undertake a 12 UOC project, MANF9010.

Year 5

24 UOC of courses are selected from the School's postgraduate courses. It is suggested that consideration be given to the courses making up the Manufacturing Engineering and Management specialisation plans outlined in the Postgraduate Handbook. Attribution of a specialisation on the Master of Engineering Science testamur may not be possible if project MANF9010 has been taken instead of certain courses. Consult the School for direction on this matter.

3710 Mechanical Engineering

Years 1, 2 and 3 (plan MECHA13710)

Students in Years 1 and 2 are enrolled in the standard single degree Mechanical Engineering plan MECHA13710 within program 3710.

Year 4 (plan MECHL13710)

In Year 4, students transfer to the special plan MECHL13710 within program 3710. This plan requires that a minimum of 12 units of credit of postgraduate courses must be selected as part of the 24 units of credit Technical Electives requirement. Typically this means that a minimum of 12 units of credit of MECH9*** courses are selected.

8710 Mechanical Engineering

After Year 4, students, having completed their engineering program, change to MEngSc program 8710.

Summer Session between Year 4 and Year 5

Students undertake a 12 UOC project, MECH9010.

Year 5

24 UOC of courses are selected from the School's postgraduate courses. It is suggested that consideration be given to the courses making up the Mechanical specialisation plans outlined in the Postgraduate Handbook.

3710 Mechatronic Engineering

Years 1, 2 and 3 (plan MTRNA13710)

Students in Years 1 and 2 are enrolled in the standard single degree Mechatronic Engineering plan MTRNA13710 within program 3710.

Year 4 (plan MTRNL13710)

In Year 4, students transfer to the special plan MTRNL13710 within program 3710. This plan requires that a minimum of 12 units of credit of postgraduate courses must be selected as part of the 18 units of credit Technical Electives requirement. Typically this means that a minimum of 12 units of credit of MTRN9*** courses are selected.

8710 Mechatronic Engineering

After Year 4, students, having completed their engineering program, change to MEngSc program 8710.

Summer Session between Year 4 and Year 5

Students undertake a 12 UOC project, MTRN9010.

Year 5

24 UOC of courses are selected from the School's postgraduate courses. It is suggested that consideration be given to the courses making up the Mechatronic specialisation plans outlined in the Postgraduate Handbook.

School of Mining Engineering

Head of School: Professor BK Hebblewhite

Director - Undergraduate Studies: Dr Paul Hagan

Administrative Assistants: Mrs Carol Bell, Mrs Kim Russell

Mining Engineering offers a diverse range of career path options, high salary levels and excellent opportunities for career progression. This is because it is a global profession that encompasses a wide range of activities involving people, technology, equipment, financial resources, community and government.

Mining Engineering is concerned with the safe, economic and environmentally sustainable recovery, processing and marketing of mineral resources from the earth. The Mining Engineering degree program includes elements from other disciplines including geology, metallurgy, commerce, economics and management. This means that graduates possessing knowledge of mining processes within this framework are very versatile and can progress rapidly both within the mining industry and in those sectors affiliated to the industry.

Career opportunities exist in areas such as operations and project management, and technical design at mine sites; corporate management within mining organisations; engineering design, geotechnical engineering, environmental engineering, risk management and technology developments with consultants, research organisations and equipment manufacturers; specialist mining software design and development with IT organisations; mine planning and design, financial evaluation and feasibility studies with merchant banks, stock brokers, mining organisations and consultants; policy formulation, administration and regulation with government; as well as opportunities in quarrying, tunnelling for infrastructure development in urban areas, education and training.

Mining engineering is an international profession with the major mining companies operating in many parts of South East Asia, Africa, South and North America and Europe. Our graduates have the flexibility and opportunity to travel in their work if they so desire. Mining Engineering graduates are trained to be versatile, adaptable and responsive to change in a physically and mentally challenging career.

Further details can be found at our website at www.mining.unsw.edu.au

The School offers a four year full-time program in Mining Engineering leading to the award of the degree of Bachelor of Engineering at Pass or Honours level. A five year combined degree program is also available with Civil Engineering, Science or Arts.

After graduation, mining engineers who choose to develop careers in operations management gain further practical experience to obtain a Mine Manager's Certificate of Competency, in either Coal or Metalliferous Mining.

Formal arrangements are in place with the University of Newcastle and the University of Tasmania for students who have completed a specified program to be admitted with advanced standing to Year 3 of the program at UNSW. Recognition of students from other institutions or graduates of other disciplines may also be considered for advanced standing to the program.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3140 Mining Engineering**Bachelor of Engineering BE****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Year 1 of the program includes courses that cover the sciences to provide the foundation for many of the engineering courses offered in Year 2. Year 3 is largely devoted to fundamental courses in mining engineering while Year 4 provides advanced instruction in aspects essential for all mining engineers. In addition, the fourth year offers a range of electives that allow students to supplement their studies with a minor specialisation. A number of General Education courses are also prescribed in the program. In keeping with the international career opportunities, students are encouraged to undertake a foreign culture/language course as a General Education elective.

An important requirement in the fourth year is for students to undertake personal research or a study project in mining or minerals engineering for which they are required to submit a dissertation for examination. High achieving students who have maintained a Distinction average grade can also choose to undertake a research project in Years 2 and 3 of the program.

For the award of Honours at the conclusion of the program, students will need to have distinguished themselves in the formal course work, in other assignments as directed by the Head of School and in the final year research project.

Some courses in the program require students to attend field trips as part of the learning process. This provides an opportunity for students to gain immediate practical insight into the application of the theoretical concepts presented in courses.

In the undergraduate program, it is compulsory for students to gain practical experience in the mining industry during successive long recesses. A minimum of 80 days needs to be completed on which a student must submit a report and give a presentation on the experience before graduation. The School assists students as much as possible in securing suitable vacation employment.

Program Objectives and Learning Outcomes

The School offers a four year full-time program in Mining Engineering leading to the award of the degree of Bachelor of Engineering at Pass or Honours level. A five year combined degree program is also available in Civil Engineering, in Science, and in Arts.

After graduation, mining engineers who choose to develop careers in operations management gain further practical experience to obtain a Mine Manager's Certificate of Competency, in either Coal or Metalliferous Mining.

Formal arrangements are in place with the University of Newcastle and the University of Tasmania for students who have satisfactorily completed a specified program to be admitted with advanced standing to Year 3 of the program at UNSW. Recognition of students from other institutions or graduates of other disciplines may also be considered for advanced standing to the program.

Program Structure**Year 1**

CHEM1817	Chemistry 1ME	(3 UOC)
GEOS1111	Fundamentals of Geology	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MATS9410	Materials for Mining Engineers	(3 UOC)
MINE1010	Introduction to Mining Engineering	(6 UOC)
MINE1020	Mining Industry Practice	(6 UOC)
MINE1300	Applied Mechanics	(6 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)

Year 2

ELEC0809	Electrical Engineering 1C	(3 UOC)
GMAT0443	Surveying for Mining Engineers	(3 UOC)
MATH2029	Engineering Mathematics 2A	(6 UOC)
MATH2039	Engineering Mathematics 2B	(3 UOC)
MINE2010	Mining Project Development	(6 UOC)
MINE2310	Structural Mechanics	(6 UOC)
MINE2320	Mining Stress Analysis	(3 UOC)
MINE2500	Fluids & Thermodynamics	(6 UOC)
MINE2700	Mining Data Analysis	(3 UOC)

Plus 3 x General Education Electives totalling 9 units of credit

Year 3

GEOS3300	Mine Geology	(3 UOC)
MINE3210	Resource Mining Control System	(3 UOC)
MINE3300	Mining Geomechanics	(6 UOC)
MINE3410	Coal Mining Systems	(6 UOC)
MINE3420	Metal Mining Systems	(6 UOC)
MINE3500	Mine Workplace Environment	(6 UOC)
MINE3610	Excavation Engineering	(6 UOC)
MINE3620	Mine Infrastructure & Services	(3 UOC)
MINE3710	Mine Economics and Business Systems	(6 UOC)
MINE3800	Mineral Processing	(3 UOC)

Year 4

MINE4210	Mine Planning	(6 UOC)
MINE4220	Coal Mine Design and Evaluation Project	(9 UOC)
MINE4230	Metal Mine Design and Evaluation Project	(9 UOC)
MINE4240	Mine Design and Evaluation	(9 UOC)
MINE4300	Geotechnical Engineering	(6 UOC)
MINE4410	Industry Applications	(6 UOC)
MINE4420	Thesis A	(6 UOC)
MINE4500	Sustainable Mining Practices	(3 UOC)
MINE4700	Mining Law	(6 UOC)

Plus Elective totalling 3 units of credit (see below)

Plus General Education totalling 3 units of credit

Mining Electives (select one)

MINE4800	Mine Simulation and Modelling	(3 UOC)
MINE4805	Mineral Process Technology	(3 UOC)
MINE4810	Comp Methods in Geomechanics	(3 UOC)

OR students may select the following:

Students may enrol in one 6 UOC course from the following graduate courses offered by the Institute of Environmental Studies (IES), subject to approval of the Head of School and availability and approval of the IES in lieu of one Mining elective (3 UOC) and MINE4500 (3 UOC).

BIOS9001	Fundamental Knowledge in Environmental Management: Ecology	(6 UOC)
ECON5125	Fundamental Knowledge in Environmental Management: Economics	(6 UOC)
IENT5001	Frameworks for Environmental Management	(6 UOC)
IENT5002	Tools for Environmental Management	(6 UOC)
LAWS3439	Fundamental Knowledge in Environmental Management: Law	(6 UOC)

General Education Requirements

Please refer to the General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 80 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

Professional Recognition

The award of the BE degree in Mining Engineering from UNSW is a recognised tertiary qualification required for corporate membership of the Australasian Institution of Mining and Metallurgy (AusIMM). On completion of the degree, a Mining Engineer may apply for Graduate Membership of the AusIMM. Following three years relevant experience after graduation, graduates may apply for Corporate Membership of the Institute. The BE degree in Mining Engineering is also required in some jurisdictions to obtain the statutory qualification of Mine Manager.

3142 Mining Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This option is available to students wishing to supplement their Mining Engineering degree with courses from the Faculty of Science. The minimum time to complete this combined program is five years.

The selection of specialisations in the Science component is quite flexible. It is important, however, that students discuss their interests with the relevant program authorities as programs may need to be individually tailored to suit each student. Also, students must undertake the BSc in accordance with the requirements for the award of a BSc degree. There may be restrictions on course availability due to timetabling constraints.

A more structured program is available in the BE(Mining)/BSc(Computer Science) program. This combination is an excellent choice for students who have a strong computing interest. Details of this program are available from the School of Mining Engineering.

Please note that there may be a minimum UAI requirement for entry to the combined BE BSc degree. Please contact the School of Mining Engineering for information regarding this combined degree.

Program Structure

Please contact the School of Mining Engineering for information regarding the Program Structure.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3144 Mining Engineering/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

A wide range of options are available in this 5 year combined degree. The Bachelor of Arts degree must be completed in accordance with the requirements for the award of a BA. Students interested in this combined degree must discuss their planned program with the individual program Authorities. There may be restrictions on course availability due to timetabling constraints.

Please note that there may be a minimum UAI requirement for entry to the combined BE/BA degree. Please contact the School of Mining Engineering for more information.

Program Structure

Please contact the School of Mining Engineering and the Faculty of Arts for information on the Program Structure.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

These combined programs of five years full-time study enable students in the School to qualify for the award of the degrees of Bachelor of Engineering and Bachelor of Arts. With these programs students can add their choice of an Arts major to the standard professionally accredited Mining Engineering program. It provides flexibility in course choice within the full Arts program and enables students to obtain the broader education offered by the Arts and Social Sciences. Since Engineering and Arts programs can have a common content, such as mathematics and physics, approximately two additional sessions of study are required to gain the additional qualifications of Bachelor of Arts. In general, this additional study is taken concurrently with the BE program and both can be completed within 10 sessions.

The programs are open to all students who satisfy both the Mining Engineering and Arts entry conditions. Students may enter directly in Year 1 or may apply to transfer from the normal engineering program after completion of at least one year if they have a credit or higher average or permission from the Head of School.

The BE BA programs are administered by the School of Mining Engineering. The School requires the student to obtain the approval of the Faculty of Arts and Social Sciences for the BA components of their program. The School of Mining Engineering must approve the final program timetable.

1. Students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. subjects designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one school of department.
2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environmental Studies*
European Studies
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

*Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.

3. Except for courses completed as part of the Environmental Studies major sequences, no more than 12 units of credit may be obtained from courses in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE programs can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students must complete the full requirements of the program 3140 BE in Mining Engineering except that they are exempt from the General Education requirement of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE BA program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

Industrial Experience Requirements

All students must complete at least 80 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3715 Mining Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

3146 Civil Engineering/Mining Engineering

Bachelor of Engineering Bachelor of Engineering BE BE

Students initially enrol in courses in the Bachelor of Engineering (Civil Engineering) program 3620 which is administered by the School of Civil Engineering. The first three and one half years of the combined degree program are therefore identical to the 3620 program. After completing six sessions in the 3620 program, students may apply to enter the Bachelor of Engineering in Mining Engineering program 3146 which is administered by the School of Mining Engineering and aim to complete the mining requirements in four additional sessions. Students considering this option should discuss the above arrangements with the relevant program authorities.

For more information, please refer to the entry under the School of Civil and Environmental Engineering in this Handbook

Fast Track Program with Master of Engineering Science

3140 Mining Engineering/Master of Engineering Science – Plan MINEP13140

Bachelor of Engineering Master of Engineering Science BE MEngSc

Students may undertake a four and one half years (10 semesters) full-time combined program leading to the awards of a Bachelor of Engineering and a Master of Engineering in Mining Engineering.

Students undertake the first three years (six semesters) of the BE program in Mining Engineering. Subject to satisfying a minimum performance over these three years (see "Rules for Progression and the Award of Degrees"), they must (a) substitute 12 UOC in the standard Yr4 BE degree program with a School approved 12 UOC of graduate coursework in their 4th year; (b) undertake a 12 UOC project/thesis work over the Summer (9th

Semester; and (c) undertake 24 UOC of graduate coursework in the tenth semester (first half of their 5th year).

Year 1 to Year 3

Same as program 3140

		HPW		UOC
Year 4		S1	S2	
Mining Management Specialisation Option				
MINE4210	Mine Planning	5	-	6
MINE4300	Geotechnical Engineering	5	-	6
MINE8210	Management Systems	B*	-	6
MINE4410	Industry Applications	4	-	6
MINE4220	Coal Mine Design & Evaluation Project or	-	7	9
MINE4230	Metal Mine Design & Evaluation Project or	-	7	9
MINE4240	Mine Design & Evaluation Project	-	7	9
MINE4420	Thesis A	-	4	6
MINE8220	Mine Feasibility, Planning and			
	Project Evaluation	-	B*	6
	General Education	-	2	3

OR

Mining Geomechanics Specialisation Option

MINE4210	Mine Planning	5	-	6
MINE8140	Mining Geomechanics	B*	-	6
MINE4700	Mining Management 2	4	-	6
MINE4410	Industry Applications	4	-	6
MINE4220	Coal Mine Design & Evaluation Project or	-	7	9
MINE4230	Metal Mine Design & Evaluation Project or	-	7	9
MINE4240	Mine Design & Evaluation Project	-	7	9
MINE4420	Thesis A	-	4	6
MINE8760	Mine Geology and Geophysics for Mining Operations	-	B*	6
	General Education	-	2	3

B* indicates course is presented in block format – contact School for further details.

Year 5 (Summer Session)

MINE8000	Graduate Project	6	-	12

Year 5 Session 1

During Session 1, students undertake four 6 UOC Mining MEngSc courses according to their specialisation and subject to timetabling constraints.

School of Petroleum Engineering

Director: Professor WV Pinczewski

Petroleum Engineering is a specialised engineering discipline which prepares graduates for careers in the oil and gas industries. Its related operations apply physical, mathematical and engineering principles to identify and solve problems associated with exploration, exploitation, drilling, production and all the related economic and management problems associated with the recovery of hydrocarbons and alternative sources of energy from deep beneath the earth's surface.

The School of Petroleum Engineering offers both undergraduate and postgraduate programs as well as open learning programs on the Internet leading to the award of Graduate Diploma, Graduate Certificate and Master of Engineering Science degrees in Petroleum Engineering.

The undergraduate program for the award of a Bachelor of Engineering in Petroleum Engineering requires four years of full-time study. This degree is fully accredited and recognised internationally.

Entry is normally into Year 1 of the program. Students who satisfy the requirements of other full-time engineering degree programs at UNSW or any other Australian tertiary institution may be admitted into Year 2 or Year 3 of the undergraduate Petroleum Engineering program. These students will need to complete an appropriately modified Year 2 or Year 3 of the program as the case demands. The same requirements apply to students from accredited tertiary institutions in other countries. The award of Honours in the Petroleum Engineering program requires students to have distinguished themselves in the formal work, as well as in related assignments and industrial training periods as advised by the Director of Undergraduate Studies of the School.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3045 Petroleum Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The undergraduate program for the award of a Bachelor of Engineering in Petroleum Engineering requires four years of full-time study. This degree is fully accredited and recognised internationally.

Entry is normally into Year 1 of the program. Students who satisfy the requirements of other full-time engineering degree programs at UNSW or any other Australian tertiary institution may be admitted into Year 2 or Year 3 of the undergraduate Petroleum Engineering program. These students will need to complete an appropriately modified Year 2 or Year 3 of the program as the case demands. The same requirements apply to students from accredited tertiary institutions in other countries. The award of Honours in the Petroleum Engineering program requires students to have distinguished themselves in the formal work, as well as in related assignments and industrial training periods as advised by the Director of Undergraduate Studies of the School.

This program extends over four years and students study full-time during the day for 28 weeks of each year (excluding examinations and recess periods).

Successful completion of the BE degree program is accepted by the Institution of Engineers Australia, and the Institution of Chemical Engineers as sufficient academic qualification for corporate membership.

The Director of Undergraduate Studies may approve various program patterns involving full-time or part-time studies.

Program Objectives and Learning Outcomes

Petroleum Engineering is a specialised engineering discipline which prepares graduates for careers in the oil and gas industries. Its related operations apply physical, mathematical and engineering principles to identify and solve problems associated with exploration, exploitation, drilling, production and all the related economic and management problems associated with the recovery of hydrocarbons and alternative sources of energy from deep beneath the earth's surface.

Program Structure

Year 1

CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)
PHYS1169	Physics 1 (Chem, Mech, Min Eng)	(6 UOC)
PTL1010	Introduction to the Petroleum Industry	(3 UOC)
PTL1013	Computing - Petroleum Engineers	(6 UOC)
PTL1016	Reservoir Rock & Fluid Properties	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
GEOS3321	Fundamentals of Petroleum Geology	(6 UOC)
MATH2020	Mathematics 2A	(3 UOC)
MATH2030	Mathematics 2B	(3 UOC)
MATH2899	Applied Statistics for Chemical Engineers	(3 UOC)
PTL2010	Business Communication Skills	(6 UOC)

PTL2014	Fluid Dynamics in Porous Media	(3 UOC)
PTL2015	Well Drilling Equipment & Operations	(3 UOC)
PTL2016	Introduction to Petrophysics	(3 UOC)
General Education		(6 UOC)

Electives

Students must take 3 units of credit of electives in Year 2

SESC1580	Risk Management 1	(3 UOC)
SESC3020	Occupational Health and Safety Law 1	(3 UOC)

Year 3

PTL3008	Reservoir Engineering A	(6 UOC)
PTL3009	Reservoir Engineering B	(6 UOC)
PTL3013	Reservoir Characterisation and Modelling	(3 UOC)
PTL3016	Field Development Geology for Petroleum Engineers	(3 UOC)
PTL3023	Formation Evaluation	(6 UOC)
PTL3024	Drilling Fluids & Cementing Techniques	(6 UOC)
PTL3025	Petroleum Economics	(6 UOC)
General Education		(6 UOC)

Electives

Students must take 6 units of credit of electives in Year 3

COMP4920	Professional Issues and Ethics	(3 UOC)
GEOS3341	Special Topics in Petroleum Geoscience	(3 UOC)
PTL3021	Design Project for Petroleum Engineers	(6 UOC)
SESC3101	Risk Assessment and Safety Engineering	(6 UOC)

Year 4

GEOS3331	Petroleum Reservoir Geophysics	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)
PTL4001	Integrated Oil/Gas Field Evaluation	(9 UOC)
PTL4015	Numerical Reservoir Simulation	(3 UOC)
PTL4016	Natural Gas Engineering	(3 UOC)
PTL4017	Well Technology	(6 UOC)
PTL4018	Petroleum Production Engineering	(3 UOC)
SESC9221	Major Hazards Management	(6 UOC)

Electives

Students must take 6 UOC of electives in Year 4

INFS1603	Business Data Management	(6 UOC)
SESC3310	Social Issues in Science and Technology	(3 UOC)
SESC4310	Industrial Safety Management	(3 UOC)

General Education Requirements

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience (or professional practice in the case of Surveying and Spatial Information Systems students) prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3047 Petroleum Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may seek to undertake a five-year full-time combined program leading to the award of the degree of Bachelor of Engineering in Petroleum Engineering and Bachelor of Science (BE BSc).

The School of Petroleum Engineering is the academic unit responsible for the program. All programs must be approved by both the Faculty of Engineering and the Faculty of Science. The School will consult with the Faculty of Science in approving the BSc component of the program.

Students must satisfy admission requirements for both the BE in Petroleum Engineering and BSc programs.

Program Structure

With the combined degree program, students complete a full, professionally accredited 4-year Engineering program (which includes Science courses) and add an additional 5th year to augment the Science component of the combined degree program. In all, a minimum of 102 units of credit of science courses must be taken with the combined program, which must include a Science major defined in Table A in the Science Handbook, or an approved major in Computer Science where this is permitted.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

3715 Petroleum Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

School of Photovoltaic and Renewable Energy Engineering

Head of School: Dr R.P. Corkish

Director of Academic Studies: Scientia Professor S.R. Wenham

Director of Research: Scientia Professor M.A. Green

Undergraduate Coordinator: Dr J.E. Cotter

Postgraduate Coordinator: Dr A.B. Sproul

Research Coordinator: A/Prof A. G. Aberle

Student Administration Manager: Ms. T. Burns

The need for the School of Photovoltaic and Renewable Energy Engineering has arisen due to rapid growth and evolution in the photovoltaic industry in recent years, with considerable demand by industry for UNSW developed technologies and appropriately trained engineers across the entire photovoltaic and renewable energy sectors. It originally comprised three centres established by the Australian Research Council: the Photovoltaics Special Research Centre, the Key Centre for Teaching and Research in Photovoltaic Engineering, and the Special Research Centre for Third Generation Photovoltaics. However, in 2003, the UNSW Centre of Excellence for Advanced Silicon Photovoltaics and Photonics was established merging the three centres into one.

The School offers undergraduate and postgraduate training encompassing all aspects of the photovoltaic and renewable energy sectors. Innovative teaching techniques have been developed to enhance the learning environment. UNSW academics in the photovoltaic field have been consistently ranked amongst the leaders worldwide through international peer review. This team has held the world record for silicon solar cell efficiencies for almost two decades and has been responsible for

developing the most successfully commercialised new photovoltaic technology internationally throughout the same period.

Summary of Undergraduate Programs

Normal Full-time

Single Degree Programs Duration

3642	BE in Photovoltaics and Solar Energy	4 years
3657	BE in Renewable Energy Engineering	4 years

Combined Degree Programs * Duration

3655	BE in Photovoltaics and Solar Energy/ Bachelor of Science	5 years
3656	BE in Photovoltaics and Solar Energy/ Bachelor of Arts	5 years
3658	BE in Renewable Energy Engineering/ Bachelor of Science	5 years
3715	BE in Photovoltaics & Solar Energy or BE in Renewable Energy Engineering/ Bachelor of Commerce	5.5 years

**Please note: The School is in the process of obtaining approval for a BE in Renewable Energy Engineering / Bachelor of Arts. Please see the School Office if you would like to know more about this proposed program.*

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3642 Photovoltaics and Solar Energy

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The undergraduate engineering degree in Photovoltaics (PV) and Solar Energy was established in 2000 and is a four-year full-time program. It is the first of its kind internationally and won the Education and Awareness Award at the 2004 Energy and Water Green Globe Awards held by the Department of Energy, Utilities and Sustainability. The program has been established in response to rapid growth in the industry in recent years in both manufacturing capacity and job creation. In 2004 global manufacturing of solar cells expanded by 67% - growth reminiscent of the electronics industry in the booming 1980s.

The program includes training in technology development, manufacturing, quality control, reliability and lifecycle analysis, cell interconnection and encapsulation, a range of solar cell applications, system design, maintenance and fault diagnosis, marketing, policy development and the use of other renewable energy technologies. Considerable emphasis is placed on gaining hands-on experience of working with PV devices, modules and systems.

Second Area of Specialisation

The cross-disciplinary nature of photovoltaics and renewable energy applications necessitates many PV engineers possessing broad engineering backgrounds or else working in teams with other engineers. A good example is the UNSW Solar Car Project involving PV engineers, electronics engineers, control engineers, mechanical engineers, chemical engineers, power engineers, biomedical engineers, computer engineers, and communications engineers, etc. Therefore it is important for photovoltaic engineers to have a broader understanding of other engineering disciplines.

A unique feature of this program is that in Year 2, students have the opportunity to select one of ten possible strands to complement their education in Photovoltaics and Solar Energy. Each strand comprises 18 units of credit with the opportunity to subsequently select additional electives in the corresponding area in the final two years, subject to the approval of the Undergraduate Coordinator. The strands available are

listed below and cover areas such as computing, electronics, mathematics, mechanical engineering, civil engineering, physics, chemical engineering, and architecture. Students may also formulate their own strands subject to approval of the Undergraduate Coordinator.

Program Objectives and Learning Outcomes

The broad objective of the program is to produce well educated graduates with the basic skills, attributes and knowledge required to practice as professional engineers. The program aims to produce graduates that are self-motivated; lifelong learners; critical thinkers; problem solvers; independent investigators; team players; good communicators; effective managers; and are environmentally, socially and ethically responsible. More specifically, the School hopes to train and educate engineers to cater for the needs of the rapidly growing and evolving photovoltaics industry.

Students in each course are assessed by way of assignments, tutorials, laboratory/project work and formal examinations. In a small number of courses/projects students are also assessed on their communication, leadership skills and project management through seminar presentations, reports and their demonstrated ability to manage a group/project.

Program Structure

Plan SOLAA13642

Year 1

ELEC1011	Electrical Engineering 1	(6 UOC)
ELEC1041	Digital Circuits	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)
SOLA1050	Introduction to Photovoltaics, Solar Energy and Computing 1	(6 UOC)
SOLA1051	Introduction to Photovoltaics, Solar Energy and Computing 2	(3 UOC)
SOLA1060	Chemical Processes for Renewable Energy Systems	(3 UOC)

Note: MATH1141 and MATH1241 may be taken at the lower level (MATH1131 and MATH1231)

Year 2

MATH2120	Mathematical Methods for Differential Equations	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
SOLA2020	Photovoltaic Technology and Manufacturing	(6 UOC)
SOLA2051	Project in Photovoltaics and Solar Energy 1	(6 UOC)
SOLA2052	Project in Photovoltaics and Solar Energy 2	(6 UOC)
SOLA2053	Sustainable & Renewable Energy Technologies	(6 UOC)
SOLA2060	Introduction to Electronic Devices	(3 UOC)
Selected Strand		(12 UOC)
General Education Elective		(3 UOC)

Note: SOLA2060 is offered every second year and will not be offered in 2006.

Year 3

ELEC2031	Circuits and Systems	(3 UOC)
SOLA3010	Photovoltaics in the Built Environment	(6 UOC)
SOLA3507	Solar Cells	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)
Professional Electives		(18 UOC)
Selected Strand (continued)		(6 UOC)
General Education		(3 UOC)

Note: SOLA3507 is offered every second year and will not be offered in 2006.

Year 4

ELEC4010	Project Management for Professional Services	(3 UOC)
ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
SOLA4910	Thesis Part A	(6 UOC)
SOLA4911	Thesis Part B	(12 UOC)
SOLA4012	Grid-Connected Photovoltaic Systems	(6 UOC)
Professional Electives		(12 UOC)
General Education elective		(6 UOC)

Notes: Where students have a weighted average mark (WAM) less than 65, they should enrol in the group thesis SOLA4914 and SOLA4915.

SOLA4012 is offered every second year and will not be offered in 2006.

Years 2 & 3 Strand Options

Please note that the strands listed below are subject to change and may not be available every year.

Strand 1 Computing

Choose one of the following courses:

COMP1011	Computing 1A	(6 UOC)
COMP1711	Higher Computing 1A	(6 UOC)

And choose one of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

And choose from the following to complete the strand:

COMP3111	Software Engineering	(6 UOC)
ELEC2041	Microprocessors & Interfacing	(6 UOC)

Or ONE of the following courses:

COMP2011	Data Organisation	(6 UOC)
COMP2711	Higher Data Organisation	(6 UOC)

Note: Students must choose whether to take Computing 1A, Computing 1B and Data Organisation at the ordinary or higher level

Strand 2 Electronics

ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
ELEC3006	Electronics A	(6 UOC)

And choose from the following to complete the strand:

ELEC3017	Electrical Engineering Design	(6 UOC)
ELEC4240	Power Electronics	(6 UOC)
ELEC4503	Electronics C	(6 UOC)
ELEC4522	Microelectronics Design and Technology	(6 UOC)

Strand 3 Electric Energy

ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
MATH2011	Several Variable Calculus	(6 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)

Strand 4 Communications and Control

ELEC2032	Electronics and Systems	(3 UOC)
ELEC2042	Real Time Instrumentation	(3 UOC)
MATH2011	Several Variable Calculus	(6 UOC)

And choose from the following to complete the strand:

ELEC3004	Signal Processing and Transform Methods	(6 UOC)
ELEC3014	Systems and Control 1	(6 UOC)
TELE3013	Telecommunication Systems 1	(6 UOC)

Strand 5 Mathematics

MATH2011	Several Variable Calculus	(6 UOC)
MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2520	Complex Analysis	(3 UOC)

And choose one from the following to complete the strand:

MATH3041	Mathematical Modelling	(6 UOC)
MATH3121	Mathematical Methods	(6 UOC)
MATH3241	Fluid Dynamics	(6 UOC)
MATH3261	Atmosphere-Ocean Dynamics	(6 UOC)

Strand 6 Mechanical Engineering

MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)
MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)

And choose from the following to complete the strand:

MECH3601	Thermofluid System Design	(3 UOC)
MECH3602	Advanced Thermodynamics	(3 UOC)
MECH9720	Solar Thermal Energy Design	(6 UOC)
MECH9740	Power Plant Engineering	(6 UOC)

Strand 7 Civil Engineering

CVEN1021	Civil Engineering Practice 1A	(4 UOC)
CVEN1023	Statics	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2026	Engineering Materials 2	(3 UOC)

Strand 8 Chemical Engineering

CEIC1020	Introduction to Chemical Engineering	(6 UOC)
CEIC2110	Material & Energy Balances	(3 UOC)
CEIC2120	Fluid Flow	(3 UOC)
CEIC2130	Heat Transfer	(3 UOC)
CEIC3110	Thermodynamics	(3 UOC)

Strand 9 Physics

MATH2011	Several Variable Calculus	(6 UOC)
PHYS2040	Quantum Physics	(3 UOC)
PHYS2060	Thermal Physics	(3 UOC)

And choose from the following to complete the strand:

PHYS3010	Quantum Mechanics (Advanced)	(3 UOC)
PHYS3020	Statistical Physics	(3 UOC)
PHYS3080	Solid State Physics	(3 UOC)
PHYS3210	Quantum Mechanics	(3 UOC)
PHYS3310	Physics of Solid State Devices	(3 UOC)
PHYS3770	Laser and Spectroscopy Lab	(3 UOC)

PHYS3080 has PHYS3010 or PHYS3210 and PHYS3020 as co-requisites
PHYS3310 has PHYS3080 as a pre-requisite

Strand 10 Faculty of the Built Environment

BENV1072	Design for Energy Efficiency	(6 UOC)

And choose from the following to complete the strand:

BENV1242	Computer-Aided Design	(3 UOC)
BENV1341	Design Modelling & Visualisation	(3 UOC)
BENV2103	Environmental Planning	(3 UOC)
BENV2720	Introduction to Lighting and Acoustics	(4 UOC)
BENV2901	City Planning Today	(3 UOC)
BLDG1050	Structures 1	(6 UOC)
BLDG1211	Construction Technology 1A	(6 UOC)
BLDG1212	Construction Technology 1B	(6 UOC)

BLDG1212 requires completion of BLDG1211 - Construction Technology 1A

Professional Electives for Years 3 & 4

Because of timetable clashes not all combinations or courses are possible

MECH9720	Solar Thermal Energy Design	(6 UOC)
MECH9740	Power Plant Engineering	(6 UOC)
SOLA5050	Renewable Energy Policy and International Programs	(6 UOC)
SOLA5051	Life Cycle Assessment	(6 UOC)
SOLA5052	Biomass	(6 UOC)
SOLA5053	Wind Energy Converters	(6 UOC)
SOLA5054	PV Stand-Alone System Design & Installation	(6 UOC)
SOLA5055	Semiconductor Devices	(6 UOC)
SOLA5056	Sust. Energy Developing Country	(6 UOC)
SOLA5058	Special Topic in Photovoltaics	(6 UOC)
SOLA5059	Industrial Elective	(6 UOC)
SOLA5060	Industrial Elective	(3 UOC)
SOLA5061	Industrial Elective	(3 UOC)
SOLA5508	High Efficiency Silicon Solar Cells	(6 UOC)

Note: The following courses are offered every second year and will not be offered in 2006: SOLA5051, SOLA5053, SOLA5054, SOLA5055, SOLA5508.

Electives can also be chosen from the courses listed as electives for Electrical Engineering, Mechanical Engineering, Civil Engineering, Environmental Engineering, Computer Science and Engineering and Chemical Engineering for which appropriate prerequisite requirements have been satisfied and which conform to the credit point requirements. Approval to substitute these electives for SOLA professional electives must be sought from the Undergraduate Coordinator. Substitutions will be restricted to a maximum of two.

The program selected by each student must be approved by the Head of School. Not all electives are available each session or each year, nor is the full range available to part-time students. Students are advised each year of the timetable of available electives. Substitution is not permitted if it unduly restricts the range of subjects studied to only one area of Photovoltaic Engineering.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3657 Renewable Energy Engineering**Bachelor of Engineering BE****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program commenced in 2003 and is a four year full-time program. Discussions on course content have been held with Australian manufacturers, major end-users, the former NSW Sustainable Energy Development Authority, the Australian CRC for Renewable Energy and the industry representative association, Solar Energy Industries Association of Australia. All these organisations have representatives on the Advisory Committee established for the School of Photovoltaic and Renewable Energy Engineering.

Consultation has also taken place as necessary with other schools within UNSW. In particular, the plans for this program have been developed in collaboration with the School of Mechanical Engineering, the School of Electrical Engineering and Telecommunications and the Faculty of the Built Environment. All of these schools will be offering courses within the new program.

Approximately half the material for this new program is in common with the program in Photovoltaics and Solar Energy. However, this new program in Renewable Energy Engineering encompasses a wider range of renewable energy technologies and their use. These include electricity generation from solar thermal systems, photovoltaics, wind turbines, biomass, tidal energy, geothermal systems, and also includes the important areas of solar architecture and the design of energy efficient housing.

Program Objectives and Learning Outcomes

The broad objective of the program is to produce well educated graduates with the basic skills, attributes and knowledge required to practice as professional engineers. The program aims to produce graduates that are self-motivated; lifelong learners; critical thinkers; problem solvers; independent investigators; team players; good communicators; effective managers; and are environmentally, socially and ethically responsible. More specifically, the School hopes to train and educate engineers to cater for the needs of the rapidly growing and evolving renewable energy industry.

Students in each course are assessed by way of assignments, tutorials, laboratory/project work and formal examinations. In a small number of courses/projects students are also assessed on their communication, leadership skills and project management through seminar presentations, reports and their demonstrated ability to manage a group/project.

Program Structure**Plan SOLAA13657****Year 1**

ELEC1011	Electrical Engineering 1	(6 UOC)
ELEC1041	Digital Circuits	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)
SOLA1055	Introduction to Renewable Energy Technologies 1	(6 UOC)
SOLA1056	Introduction to Renewable Energy Technologies2	(3 UOC)
SOLA1060	Chemical Processes for Renewable Energy Systems	(3 UOC)

Note: MATH1141 and MATH1241 may be taken at the ordinary level (MATH1131 and MATH1231).

Year 2

MATH2509	Linear Algebra for Engineers	(3 UOC)
MATH2859	Probability, Statistics and Information	(3 UOC)
MECH2611	Fluid Mechanics A	(3 UOC)
MECH2612	Fluid Mechanics B	(3 UOC)
MECH2711	Thermodynamics A	(3 UOC)
MECH2712	Thermodynamics B	(3 UOC)
SOLA1172	Solar Architectural Technologies	(9 UOC)
SOLA2060	Introduction to Electronic Devices	(3 UOC)
SOLA5050	Renewable Energy Policy and International Programs	(6 UOC)
SOLA5051	Life Cycle Assessment	(6 UOC)
General Education Electives		(6 UOC)

Note: SOLA2060 and SOLA5051 are offered every second year and will not be offered in 2006.

Year 3

MECH9720	Solar Thermal Energy Design	(6 UOC)
SOLA2053	Sustainable & Renewable Energy Technologies	(6 UOC)
SOLA3010	Photovoltaics in the Built Environment	(6 UOC)
SOLA3540	Applied Photovoltaics	(6 UOC)
SOLA5053	Wind Energy Converters	(6 UOC)
Professional Electives		(12 UOC)
General Education Electives		(6 UOC)

Note: SOLA5053 is offered every second year and will not be offered in 2006.

Year 4

ELEC4010	Project Management for Professional Services	(3 UOC)
ELEC4011	Ethics and Electrical Engineering Practice	(3 UOC)
SOLA4912	Thesis in Renewable Energy Engineering. Part A	(9 UOC)
SOLA4913	Thesis in Renewable Energy Engineering Part B	(9 UOC)
SOLA5052	Biomass	(6 UOC)
Professional Electives		(18 UOC)

Professional Electives

ARCH1271	Architectural Technologies 3	(6 UOC)
BENV1072	Design for Energy Efficiency	(6 UOC)
ELEC2015	Electromagnetic Applications	(3 UOC)
ELEC3005	Electric Energy 1	(6 UOC)
ELEC3015	Electric Energy 2	(6 UOC)
MATH2011	Several Variable Calculus	(6 UOC)
MECH3602	Advanced Thermodynamics	(3 UOC)
PHYS2939	Physics 2 (Electrical Engineering)	(3 UOC)
SOLA2020	Photovoltaic Technology and Manufacturing	(6 UOC)
SOLA3507	Solar Cells	(6 UOC)
SOLA4012	Grid-Connected Photovoltaic Systems	(6 UOC)
SOLA5054	PV Stand-Alone System Design & Installation	(6 UOC)
SOLA5055	Semiconductor Devices	(6 UOC)
SOLA5056	Sust. Energy Developing Country	(6 UOC)
SOLA5508	High Efficiency Silicon Solar Cells	(6 UOC)

Notes:

ELEC2015, PHYS2939 and MATH2011 cannot be taken without course authority permission.

The following courses are offered every second year and will not be offered in 2006: SOLA3507, SOLA4012, SOLA5054, SOLA5055, SOLA5508.

With the program authority's permission, courses can also be chosen from amongst the electives offered by other Schools, provided that appropriate pre-requisites have been satisfied and they conform to the units of credit requirements.

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under Faculty Information and Assistance in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3655 Photovoltaics and Solar Energy/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may seek to undertake a five-year full-time combined program leading to the award of the degrees of Bachelor of Engineering in Photovoltaics and Solar Energy and a Bachelor of Science (BE BSc). Students complete a full professionally accredited 4-year Engineering program (which includes Science courses) and add an additional 5th year to augment the Science component of the combined degree program.

Program Objectives and Learning Outcomes

The broad objective of the program is to produce well educated graduates with the basic skills, attributes and knowledge required to practice as professional engineers.

The program aims to produce graduates that are self-motivated; lifelong learners; critical thinkers; problem solvers; independent investigators; team players; good communicators; effective managers; and are environmentally, socially and ethically responsible. More specifically, the School hopes to train and educate engineers to cater for the needs of the rapidly growing and evolving photovoltaics industry.

Students in each course are assessed by way of assignments, tutorials, laboratory/project work and formal examinations. In a small number of courses/projects students are also assessed on their communication, leadership skills and project management through seminar presentations, reports and their demonstrated ability to manage a group/project.

Offering the Photovoltaics and Solar Energy Engineering program in combination with a Bachelor of Science, enables students with broader interests to simultaneously pursue a second degree which will extend their skill set and knowledge beyond the professionally oriented engineering program.

Program Structure

Plan SOLAA13655

Students should start discussing their program with representatives of the Faculty of Science as soon as possible, preferably well before enrolment in Year 2. Enquiries should be directed to the Executive Officer in the Science Student Centre, or the Associate Dean for Student Affairs in the Faculty of Science.

Students should work out for themselves the Science program they would like to add to the Photovoltaics and Solar Energy Engineering program. The Faculty of Science section in this Handbook describes the options. There are no special rules on what to include in each year. Students should schedule the Science and Engineering components to suit their preferences while meeting the constraints of timetables and prerequisites.

The Science component must be approved by the Faculty of Science.

The final program and schedule must be approved by the School of Photovoltaic and Renewable Energy Engineering.

Honours

(a) BE with Honours

On completion of the requirements for the combined degree a student may qualify for the award of the BE degree with Honours in accordance with the rules for the BE in Photovoltaics and Solar Energy Engineering and the Faculty of Engineering rules for calculation of the grade of Honours (1st Class Honours: a weighted average of 75% or greater; 2nd Class Honours Division 1: a weighted average of 70% or greater; 2nd Class Honours Division 2: a weighted average of 65% or greater, a student being awarded the highest grade of Honours for which they qualify).

(b) BSc with Honours

On completion of the requirements of the combined degree a student may be qualified to enrol in an Honours program in the Bachelor of Science and to qualify for the award of the BSc with Honours after successfully completing an additional year of study (48 Units of Credit) as specified in the rules of the Faculty of Science.

Academic Rules

To qualify for the Bachelor of Engineering and Bachelor of Science a student must complete successfully courses that total at least 240 units of credit and include:

(a) In the Faculty of Engineering:

- Courses making up a full 4-year engineering program described in the degree requirements for the Photovoltaics and Solar Energy Engineering program; and

(b) In the Faculty of Science:

- At least 102 units of credit comprising a major in an approved disciplinary stream described in the Science section of this Handbook, or a major in Computer Science; and

(c) At least 60 days of approved industrial training (required for the award of the BE degree)

To meet these requirements, as part of their BE in Photovoltaics and Solar Energy program, students need to complete a strand offered within the Faculty of Science. Please see a list of strands in the program entry for 3642 BE in Photovoltaics and Solar Energy in this Handbook.

3656 Photovoltaics and Solar Energy/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA**Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined degree program, students can add their choice of Arts program to the standard Engineering program offered by the School of Photovoltaic and Renewable Energy Engineering. The full range of Arts courses is available.

Because the Engineering and Arts programs have many common objectives and content, such as mathematics and physics, only one more year of study is normally required to gain the additional qualification of Bachelor of Arts.

Students should start discussing their program with the Faculty of Arts and Social Sciences office as soon as possible, preferably well before enrolment in Year 2.

Students should work out for themselves the Arts program they would like to add to their chosen Engineering program. The Faculty of Arts and Social Sciences section in this Handbook describes the options.

The Arts component must be approved by the Faculty of Arts and Social Sciences.

The final program and schedule must be approved by the School of Photovoltaic and Renewable Energy Engineering.

Program Objectives and Learning Outcomes

The broad objective of the program is to produce well educated graduates with the basic skills, attributes and knowledge required to practice as professional engineers. The program aims to produce graduates that are self-motivated; lifelong learners; critical thinkers; problem solvers; independent investigators; team players; good communicators; effective managers; and are environmentally, socially and ethically responsible. More specifically, the School hopes to train and educate engineers to cater for the needs of the rapidly growing and evolving photovoltaics industry.

Students in each course are assessed by way of assignments, tutorials, laboratory/project work and formal examinations. In a small number of courses/projects students are also assessed on their communication, leadership skills and project management through seminar presentations, reports and their demonstrated ability to manage a group/project.

Offering the Photovoltaics and Solar Energy Engineering program in combination with a Bachelor of Arts, enables students with broader interests to simultaneously pursue a second degree which will extend their skill set and knowledge beyond the professionally oriented engineering program.

Program Structure

This program comprises five years of full-time study where, in addition to the BE program, students must complete 60 units of credit comprising a major sequence offered by the Faculty of Arts and Social Sciences. Students must apply through UAC for admission into or transfer to this combined program.

There are no special rules on what to include in each year. Students should schedule the Arts and Engineering components to suit their preferences while meeting the constraints of timetables and prerequisites.

Students who commence this program but subsequently do not wish to proceed with both areas of study, should apply in writing to the Program Authority for permission to revert to the single degree program.

Please contact the School of Photovoltaic and Renewable Energy Engineering and the Faculty of Arts and Social Sciences for more information.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA, the award of the BA degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate School in the Faculty of Arts and Social Sciences.

AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

1. In addition to the BE program, students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. in courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one school of department.

2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environmental Studies*
European Studies
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music
Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

**Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.*

3. Except for courses completed as part of the Environmental Studies major sequences, no more than 12 units of credit may be obtained from subjects in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE program can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students are exempt from the General Education requirement of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE BA program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

There will be a separate testamur for each part of the combined degree program.

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under Faculty Information and Assistance in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved industrial experience prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of industrial employment at a standard approved by the University.

3715 Photovoltaics & Solar Energy/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

3658 Renewable Energy Engineering/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students may seek to undertake a five-year full-time combined program leading to the award of two degrees, a Bachelor of Engineering in Renewable Energy Engineering, and a Bachelor of Science (BE BSc). The program is administered by the School of Photovoltaic and Renewable Energy Engineering, however students should seek advice from the Faculty of Science regarding the science component of their program. All programs must be approved by both the School of Photovoltaic and Renewable Energy Engineering and the Faculty of Science.

Program Objectives and Learning Outcomes

The broad objective of the program is to produce well educated graduates with the basic skills, attributes and knowledge required to practice as professional engineers. The program aims to produce graduates that are self-motivated; lifelong learners; critical thinkers; problem solvers; independent investigators; team players; good communicators; effective managers; and are environmentally, socially and ethically responsible. More specifically, the School hopes to train and educate engineers to cater for the needs of the rapidly growing and evolving photovoltaics industry.

Students in each course are assessed by way of assignments, tutorials, laboratory/project work and formal examinations. In a small number of courses/projects students are also assessed on their communication, leadership skills and project management through seminar presentations, reports and their demonstrated ability to manage a group/project.

Offering the Renewable Energy Engineering program in combination with a Bachelor of Science, enables students with broader interests to simultaneously pursue a second degree which will extend their skill set and knowledge beyond the professionally oriented engineering program.

Program Structure

With the combined degree program, students complete a full, professionally accredited 4-year Engineering program (which includes Science courses) and add an additional 5th year to augment the Science component of the combined degree program. In all, a minimum of 102 Units of Credit of Science courses must be taken within the combined program, which must include a Science Major defined in Table A in the Science Handbook, or an approved Major in Computer Science where this is permitted (Computer Science may not be combined with any other computing degree).

For Renewable Energy Engineering students to meet this criteria, they are required to substitute 12 units of credit of approved Science courses for SOLA5050 and SOLA5051 which form part of the standard Renewable Energy Engineering (3657) program.

Approved science courses include any course that forms part of the Maths or Physics strand in the Photovoltaics and Solar Energy (3642) program. Students will then have the opportunity to take SOLA5050 and SOLA5051 in their 3rd or 4th year as a professional elective. Students will need to complete Course Substitution Forms for these substitutions which are available from the School Office.

Award of the Degrees

(i) A student who completes the requirements for both the BE and BSc degrees shall receive at graduation a separate testamur for each of the degrees.

(ii) Both testamurs will be awarded at the same graduation ceremony.

(iii) A student may apply to discontinue the combined BE BSc programs and elect to complete either the BE or the BSc degree in accordance with the rules governing award of that degree. Following the discontinuation of one of the programs (BE or BSc), courses which count toward that program will not in general count toward the remaining single degree unless they meet the single degree requirements in their own right.

Enrolment

(i) An application to enrol as a candidate for the combined program shall be made through UAC, or on the prescribed form for international students which shall be lodged with the Registrar at least two calendar months before the commencement of the session in which enrolment is to begin.

(ii) The candidate shall be enrolled as either a full-time or part-time student.

Honours

BE with Honours:

On completion of the requirements for the combined degree a student may qualify for the award of the BE degree with Honours in accordance with the rules for the BE program of specialisation and the Faculty of Engineering rules for calculation of the grade of Honours (1st Class Honours: a weighted average of 75% or greater; 2nd Class Honours Division i: a weighted average of 70% or greater; 2nd Class Honours Division ii: a weighted average of 65% or greater, a student being awarded the highest grade of Honours for which they qualify).

BSc with Honours:

On completion of the requirements for the combined degree a student may be qualified to enrol in an Honours program in the Bachelor of Science and to qualify for the award of the BSc with Honours after successfully completing an additional year of study (48 UOC) as specified in the rules of the Faculty of Science.

Academic Rules

For academic requirements relating to this program, please refer to Program Structure and contact the School of Photovoltaic and Renewable Energy Engineering for more information.

3715 Renewable Energy Engineering/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

School of Surveying and Spatial Information Systems

Head of School: Professor C. Rizos

Administrative Officer: Mr L Daras

The School's undergraduate programs involve an integrated approach to the measurement, analysis, storage, management, distribution and application of spatially-referenced data. Spatial data underpins many applications in modern society, and the range of spatial technologies and applications is expanding rapidly. A graduate from the School may choose to enter the profession of surveying or an associated spatial information discipline. For further information on the School's programs and research visit www.gmat.unsw.edu.au

An education in surveying deals with topics such as satellite positioning, geodesy, mapping, survey measurement technologies and computations, as applied to applications such as engineering and cadastral surveying, and land management and development in general. With the selection of the appropriate elective courses, a graduate may choose instead to specialise in Spatial Information Systems (SIS), a fast moving IT area. Topics include computing, databases, geographic information systems, GPS technologies, digital mapping, remote sensing and image analysis. SIS applications include land information and resource management, navigation, and telematics.

3741 Bachelor of Engineering in Surveying & SIS

The BE in Surveying and SIS is a four year full-time degree program. This program aims to prepare a graduate for a broad range of career opportunities in the various branches of surveying and the numerous SIS disciplines. To this end, the program covers general scientific and IT principles, as well as specialised surveying and SIS topics. This specialisation is provided for through the provision of a wide range of elective courses offered in the third and fourth year of the program.

The degree of BE in Surveying and SIS is recognised by the Board of Surveyors of NSW as meeting the requirements for entry as a candidate to become a Registered Surveyor. The degree is also recognised by the Institution of Surveyors, Australia, and the Institution of Engineers Australia, for admission as corporate members.

3746 Bachelor of Engineering in Surveying & SIS / Bachelor of Science

This combined degree program of five years full-time study enables a student to qualify for the award of the two degrees of Bachelor of Science and Bachelor of Engineering in Surveying & SIS. This program is open to all students who satisfy both the Surveying & SIS and Science entry conditions.

The program is designed for those wishing to broaden their career options.

3747 Bachelor of Engineering in Surveying & SIS / Bachelor of Arts

With this combined five year degree program, students can add their choice of an Arts major to the standard, professionally accredited engineering program offered by the School of Surveying and Spatial Information Systems. The program is open to all students who satisfy both the Engineering and Arts entry conditions. The program provides flexibility in the choice of courses within the full Arts program, and enables students to gain a broad education in Arts and Social Sciences, as well as undertake specialised studies in Surveying and SIS.

3715 Bachelor of Engineering in Surveying & SIS/Bachelor of Commerce

This combined degree of five ½ years full-time study enables a student to qualify for the award of the two degrees Bachelor of Engineering and Bachelor of Commerce. Please refer to full details under Program Rules and Information in this Handbook.

3741 Bachelor of Engineering in Surveying & SIS / Master of Engineering Science

Students may undertake a five year full-time fast-track program leading to the award of the degrees of BE in Surveying & SIS and a Masters of

Engineering Science. The aim of the program is to offer an accelerated postgraduate coursework program to high achieving students. In addition to the undergraduate BE degree, graduates receive in-depth specialist training to facilitate employment in discipline specific consulting practices and other specialised disciplines.

There is a testamur awarded for each degree. The BE degree will be awarded on the satisfactory completion of the first four years of the program.

Professional Practice / Industrial Experience

Students are required to complete at least 60 days of Professional Practice experience in each of the above programs.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

3741 Surveying and Spatial Information Systems

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The BE in Surveying and SIS is a four year, full time degree program. This program aims to prepare a graduate for a broad range of career opportunities in the various branches of Surveying and the numerous SIS disciplines. To this end the program covers general scientific and IT principles, as well as specialised Surveying and Spatial Information topics.

Specialisation is provided for through the provision of elective courses offered in the third and fourth year of the program.

The degree of BE in Surveying and SIS is recognised by the Board of Surveying and Spatial Information of New South Wales as meeting the requirements for entry as a candidate to become a Registered Surveyor. The degree is also recognised by the Institution of Surveyors, New South Wales, the Spatial Sciences Institute and the Institution of Engineers Australia, for admission as corporate members.

Program Objectives and Learning Outcomes

Please contact the School of Surveying & Spatial Information Systems for information on the Program Objectives and Learning Outcomes.

Program Structure

Year 1

GMAT1100	Principles of Surveying	(6 UOC)
GMAT1150	Survey Methods & Computations	(6 UOC)
GMAT1200	Visualisation of Spatial Data	(6 UOC)
GMAT1300	Computing Applications in Geomatics	(6 UOC)
GMAT1400	Land Studies in Geomatics	(6 UOC)
PHYS1189	Physics 1 (Geomatic Engineering)	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

GMAT2100	Electronic Surveying Instrumentation: Principles & Practice	(6 UOC)
GMAT2110	Electronic & GPS Positioning Technologies	(6 UOC)
GMAT2200	Geographic Information Systems & CAD	(6 UOC)
GMAT2300	Analysis of Observations	(3 UOC)
GMAT2350	Computing for Spatial Information Sciences	(3 UOC)
GMAT2700	Geometry of Coordinate Reference Systems	(6 UOC)

MATH2019	Engineering Mathematics 2CE	(6 UOC)
MATH2829	Statistics SU	(3 UOC)
PHYS2969	Physics of Measurement (Geomatic Engineering)	(3 UOC)

Note: PHYS2969 may not be offered every year. It can be done in Year 2 or 3.

Year 3

The program structure for Years 3 and 4 of the program depends on the electives chosen by students.

GMAT3200	Geospatial Information Techniques and Applications	(6 UOC)
GMAT3400	Cadastral Surveying 1	(3 UOC)
GMAT3410	Land Economics & Valuation	(3 UOC)
GMAT3500	Photogrammetry and Remote Sensing	(6 UOC)
GMAT3150	Field Projects	(6 UOC)
General Education courses		(6 UOC)
Session 1 Electives		(12 UOC)
Session 2 Electives		(6 UOC)

Electives: Session One

BENV2901	City Planning Today	(3 UOC)
COMP1011	Computing 1A	(6 UOC)
CVEN0646	Water and Wastewater Engineering	(3 UOC)
GMAT3100	Surveying Applications	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

Electives: Session Two

COMP1011	Computing 1A	(6 UOC)
COMP1021	Computing 1B	(6 UOC)
COMP2011	Data Organisation	(6 UOC)
CVEN0656	Soil & Pavement Engineering	(3 UOC)
GMAT3450	Cadastral Surveying 2	(3 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

Year 4

GMAT4000	Thesis Part A	(3 UOC)
GMAT4001	Thesis Part B	(9 UOC)
GMAT4700	Project Management 1	(3 UOC)
GMAT4750	Project Management 2	(3 UOC)
GMAT4850	Surveying and Spatial Information Systems for Sustainability	(3 UOC)
Session 1 Electives		(15 UOC)
Session 2 Electives		(12 UOC)

Electives

Any remaining Year 3 electives and

GEOH3911	Environmental Impact Assessment	(6 UOC)
GMAT4020	Project in Surveying and SIS	(6 UOC)
GMAT4400	Land Management & Development Project 1	(6 UOC)
GMAT4410	Land Subdivision & Development	(3 UOC)
GMAT4450	Land Management & Development Project 2	(6 UOC)
GMAT4900	Principles of Global Navigation Satellite System (GNSS) Positioning	(6 UOC)
GMAT4910	Modern Navigation & Positioning Technologies	(6 UOC)
GMAT9211	Introduction to Geodesy	(6 UOC)
MINE3410	Coal Mining Systems	(6 UOC)
PLAN1122	Development Processes	(6 UOC)
PLAN2111	Economics of Planning and Development	(6 UOC)

The following electives 5 HPW, 6UOC courses may be chosen once COMP1011, COMP1021 and MATH1081 have been completed:

COMP2021	Digital System Structures	(6 UOC)
COMP2041	Software Construction: Techniques and Tools	(6 UOC)
COMP2411	Logic and Logic Programming	(6 UOC)
COMP3111	Software Engineering	(6 UOC)
COMP3121	Algorithms and Programming Techniques	(6 UOC)
COMP3131	Programming Languages and Compilers	(6 UOC)
COMP3211	Computer Architecture	(6 UOC)
COMP3221	Microprocessors and Embedded Systems	(6 UOC)
COMP3231	Operating Systems	(6 UOC)
COMP3311	Database Systems	(6 UOC)
COMP3331	Computer Networks and Applications	(6 UOC)
COMP3411	Artificial Intelligence	(6 UOC)
COMP3511	Human Computer Interaction	(6 UOC)

and other electives with the approval of the Head of School.

The School has available a list of suggested subject selections for course streams in Cadastral Surveying and Land Development as well as GPS and Geographic Information Systems. Please contact the School Office.

Total HPW Session 1 & 2 depends on electives chosen

Total units of credit: 48

General Education

Please refer to General Education Requirements under 'Faculty Information and Assistance' in this Handbook.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Academic Rules

For program rules relating to the Bachelor of Engineering, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved professional practice prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of professional practice at a standard approved by the University.

Field Excursions

Students may have to complete a number of field projects as part of their program and are expected to complete all necessary fieldwork for any course. They must be prepared to pay all the appropriate costs associated with these field projects, and must be in attendance at all scheduled examinations, except in exceptional circumstances.

Professional Recognition

The degree of BE in Surveying and Spatial Information Systems is recognised by the Board of Surveying and Spatial Information of New South Wales as meeting requirements for entry as a candidate to become a Registered Surveyor in New South Wales. The degree is recognised by the Institution of Surveyors, New South Wales, the Spatial Sciences Institute, and the Institution of Engineers Australia (IEAust.) for admission as corporate members.

Students wishing to become Registered Surveyors after graduation are advised to gain practical experience under a Registered Surveyor during their program. Details are obtainable from the Registrar, Board of Surveying and Spatial Information of NSW, P.O. Box 143, Bathurst NSW 2795.

3746 Surveying and Spatial Information Systems/Bachelor of Science

Bachelor of Engineering Bachelor of Science BE BSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This combined degree program of five years full-time study enables a student to qualify for the award of the two degrees of Bachelor of Engineering in Surveying & SIS and Bachelor of Science. This program is open to all students who satisfy both the Surveying & SIS and Science entry conditions.

The program is designed for those wishing to broaden their career options.

Program Structure

Year 1

Session One

COMP1011	Computing 1A	(6 UOC)
GMAT1100	Principles of Surveying	(6 UOC)
PHYS1189	Physics 1 (Geomatic Engineering)	(6 UOC)

And ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

COMP1021	Computing 1B	(6 UOC)
GMAT1150	Survey Methods & Computations	(6 UOC)

And ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

and Year 1 GMAT elective either

GMAT1400	Land Studies in Geomatics	(6 UOC)

or

GMAT1200	Visualisation of Spatial Data	(6 UOC)

Year 2

Session One

GMAT2100	Electronic Surveying Instrumentation: Principles & Practice	(6 UOC)
GMAT2700	Geometry of Coordinate Reference Systems	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)
MATH2829	Statistics SU	(3 UOC)
PHYS2969	Physics of Measurement (Geomatic Engineering)	(3 UOC)

Session Two

COMP2011	Data Organisation	(6 UOC)
GMAT2110	Electronic & GPS Positioning Technologies	(6 UOC)
GMAT2200	Geographic Information Systems & CAD	(6 UOC)
GMAT2300	Analysis of Observations	(3 UOC)

and Year 2 free elective

Year 3

Session One

GMAT3200	Geospatial Information Techniques and Applications	(6 UOC)
GMAT3400	Cadastral Surveying 1	(3 UOC)
COMP2xxx	(a level 2 computing elective)	

Year 3 electives

CVEN0646	Water and Wastewater Engineering	(3 UOC)
GMAT3100	Surveying Applications	(6 UOC)

General Education course/s

Year 4

Session One

GMAT4700	Project Management 1	(3 UOC)
GMAT4850	Surveying and Spatial Information Systems for Sustainability	(3 UOC)

COMP3 (a level 3 computing elective)

Year 4 GMAT electives from:

GMAT4400	Land Management & Development Project 1	(6 UOC)
GMAT4410	Land Subdivision & Development	(3 UOC)
GMAT4900	Principles of Global Navigation Satellite System (GNSS) Positioning	(6 UOC)

Session Two

GMAT4750	Project Management 2	(3 UOC)

COMP3XXX (a level 3 computing elective) and Year 4 GMAT electives from:

GMAT4020	Project in Surveying and SIS	(6 UOC)
GMAT4450	Land Management & Development Project 2	(6 UOC)
GMAT4910	Modern Navigation & Positioning Technologies	(6 UOC)
GMAT9211	Introduction to Geodesy	(6 UOC)

Year 5

Session One

GMAT4000	Thesis Part A	(3 UOC)

COMP3 (2 level 3 Comp Science & Engineering electives totalling 12 units of credit)

Year 5 electives (totalling 9 units of credit)

Session Two

GMAT4001	Thesis Part B	(9 UOC)

COMP3xxx (a level 3 Comp Scie & Eng. elective), and Year 5 electives (9 units of credit).

Year 5 electives may be chosen from any of the remaining GMAT Year 4 electives or COMP level 3 or 4 courses.

Other arrangements of electives are possible with the approval of the Head of School.

The School of Surveying and Spatial Information Systems is the program authority.

Students may choose to do 3 units of General Education in Year 2, and another 3 units in Year 3. It is possible to revert to the single BE (Surveying and Spatial Information Systems) degree; progress and conversion will be determined on an individual student basis by the program authority.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

For academic rules relating to the combined degree Bachelor of Engineering Bachelor of Science, please refer to the 'Rules for Progression and Award of Degrees' under 'Faculty Information and Assistance' in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved professional practice prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of profession practice at a standard approved by the University.

Field Excursions

Students may have to complete a number of field projects as part of their program and are expected to complete all necessary fieldwork for any course. They must be prepared to pay all the appropriate costs associated with these field projects, and must be in attendance at all scheduled examinations, except in exceptional circumstances.

Professional Recognition

The degree of BE in Surveying and Spatial Information Systems is recognised by the Board of Surveying and Spatial Information of New South Wales as meeting requirements for entry as a candidate to become a Registered Surveyor in New South Wales. The degree is recognised by the Institution of Surveyors, New South Wales, the Spatial Sciences Institute, and the Institution of Engineers Australia (IEAust.) for admission as corporate members.

Students wishing to become Registered Surveyors after graduation are advised to gain practical experience under a Registered Surveyor during their program. Details are obtainable from the Registrar, Board of Surveying and Spatial Information of NSW, P.O. Box 143, Bathurst NSW 2795.

3747 Surveying and Spatial Information Systems/Bachelor of Arts

Bachelor of Engineering Bachelor of Arts BE BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

With this combined five year degree program, students can add their choice of an Arts major to the standard, professionally accredited

engineering program offered by the School of Surveying and Spatial Information Systems. The program is open to all students who satisfy both the Engineering and Arts entry conditions.

The program provides flexibility in the choice of courses within the full Arts program and enables students to gain a broad education in Arts and Social Sciences, as well as to engage in specialised studies in Surveying and Spatial Information Systems.

Program Structure

The program is administered by the School of Surveying and Spatial Information Systems.

Students should start discussing their program with representatives of the School and the Faculty of Arts and Social Sciences as soon as possible, preferably well before enrolment. Students should work out for themselves the BA program they would like to add to their Surveying and Spatial Information Systems program. The Faculty of Arts and Social Sciences section in this Handbook describes the options, and the School of Surveying and Spatial Information Systems can supply sample programs.

There are no special rules on what to include in each, year. Students should schedule the Arts and Surveying and Spatial Information Systems components to suit their preferences whilst meeting the constraints of timetables and prerequisites.

The Arts component must be approved by the Faculty of Arts and Social Sciences.

The final program and schedule must be approved by the School of Surveying and Spatial Information Systems.

Honours

In the Bachelor of Engineering degree programs the same formal program is offered to both Pass students and to those aiming at Honours. Honours will be awarded for meritorious performance over the program: special attention is paid to a candidate's performance in the final year courses and thesis project.

In the cases of combined degrees, such as the BE BA or the BE BSc, the award of the BA or BSc degree at Honours level requires two additional sessions of study.

Students wishing to gain a degree at Honours level in Arts or in Science as part of their combined degree program must meet all the relevant requirements of the Faculty of Arts and Social Sciences or the Faculty of Science and of the appropriate school concerned. Students may enrol for the Honours year only on the recommendation of the Head of their School in the Faculty of Engineering and with the approval of the Head of the appropriate Arts or Science School. For Honours in Science, approval must also be sought from the Science Cross Faculty Standing Committee or its delegated authorities. AUSTUDY support is available for the combined degree program including the Honours level.

Academic Rules

1. In addition to the BE program, students must complete 60 units of credit in the BA program with no more than 24 units of credit obtained at Level 1 (i.e. in courses designed for students in their first year of study). Of these 24 Level 1 units of credit, no more than 12 units of credit may be from any one school of department.

2. Students must complete a major sequence (42 units of credit) in one of the following areas:

Australian Studies
Chinese Studies
Development Studies
Education
English
Environmental Studies*
European Studies
Film
French
German Studies
Greek
History
History and Philosophy of Science
Indonesian Studies
Japanese Studies
Korean Studies
Linguistics
Media, Culture & Technology
Music

Philosophy
Policy Studies
Political Economy
Politics and International Relations
Russian Studies
Sociology & Anthropology
Spanish & Latin American Studies
Theatre & Performance Studies
Women's and Gender Studies

**Students completing an Environmental Studies major sequence must complete, in addition to the 30 Upper Level units of credit specified, 6 level 1 units of credit in an approved course. Students must also complete a minor sequence of 24 units of credit on one of the other areas listed above.*

3. Except for courses completed as part of the Environmental Studies major sequences, no more than 12 units of credit may be obtained from subjects in the BA program which are offered by schools outside the Faculty of Arts and Social Sciences.

4. No course included for credit in the BE program can be included in the 60 units of credit required at Rule 1 for the BA program.

5. Students are exempt from the General Education requirement of the BE program. However, students will not be eligible for graduation for the BE until a minimum of 12 units of credit of the BA have been successfully completed.

6. Students who complete the requirements for the BA program and the first two years of the BE BA program may proceed to graduation with the degree of Bachelor of Arts.

7. Students may be awarded Honours in the BA by successful completion of an Honours year. It should be noted that entry into a particular BA Honours program will require completion of courses additional to those specified under rules 1-4.

8. The total units of credit in the combined program is $5 \times 48 = 240$.

There will be a separate testamur for each part of the combined degree program.

For academic rules relating to the Bachelor of Engineering component of this combined program, please refer to the 'Rules for Progression and Award of Degrees' under Faculty Information and Assistance in this Handbook.

Industrial Experience Requirements

All students must complete at least 60 working days of approved professional practice prior to enrolment in the final year of their program. The award of the degree is dependent on the completion of the requisite periods of professional practice at a standard approved by the University.

Field Excursions

Students may have to complete a number of field projects as part of their program and are expected to complete all necessary fieldwork for any course. They must be prepared to pay all the appropriate costs associated with these field projects, and must be in attendance at all scheduled examinations, except in exceptional circumstances.

Professional Recognition

The degree of BE in Surveying and Spatial Information Systems is recognised by the Board of Surveying and Spatial Information of New South Wales as meeting requirements for entry as a candidate to become a Registered Surveyor in New South Wales. The degree is recognised by the Institution of Surveyors New South Wales, the Spatial Sciences Institute, and the Institution of Engineers Australia (IEAust.) for admission as corporate members.

Students wishing to become Registered Surveyors after graduation are advised to gain practical experience under a Registered Surveyor during their program. Details are obtainable from the Registrar, Board of Surveying and Spatial Information of NSW, P.O. Box 143, Bathurst NSW 2795.

3715 Surveying & Spatial Information Systems/Bachelor of Commerce

BE BCom

Please refer to the program entry for 3715 Bachelor of Engineering Bachelor of Commerce under 'Program Rules and Information' in this Handbook.

Fast Track program with Master of Engineering Science

3741 Surveying and Spatial Information Systems/Master of Engineering – Plan GMATL13741

Bachelor of Engineering Master of Engineering Science BE MEngSc

Students may undertake a 4.5 years (10 semesters) full-time fast-track program leading to the awards of a Bachelor of Engineering and a Master of Engineering in Surveying and Spatial Information Systems.

Students undertake the first three years (6 semesters) of the BE program in Surveying and Spatial Information Systems. Subject to satisfying a minimum performance over these three years (see “Rules for Progression and the Award of Degrees”, they (a) substitute 12 units of credit of the standard 4th year BE degree program with a School approved 12 units of credit of graduate coursework in their 4th year; (b) undertake a 12 units of credit of project/thesis work over the Summer (9th) Semester; and (c) undertake 24 units of credit of graduate coursework in the 10th semester (first half of their 5th year).

Graduate School of Biomedical Engineering

Head of School: Professor BK Milthorpe

The Graduate School of Biomedical Engineering is an interdisciplinary unit which promotes and coordinates biomedical engineering studies and research being conducted by various schools and departments within the University and its teaching hospitals. Biomedical Engineering is the application of engineering techniques and analysis to problem solving in medicine and the biological sciences. The engineering disciplines embraced within the scope of Biomedical Engineering include: Electrical Engineering, Mechanical Engineering, Computer Engineering, Materials Science, Chemical Engineering, and Bioinformatics. Biomedical Engineering provides a direct input to enhancing the quality and scope of health care through the application of engineering analysis to biological systems and introducing engineering principles to medical and surgical interventions.

The Graduate School of Biomedical Engineering, in conjunction with the Schools of Mechanical and Manufacturing Engineering, Electrical Engineering and Telecommunications, Computer Science and Engineering, Material Science and Engineering, and Chemical Engineering and Industrial Chemistry, offers concurrent degree programs which allow the completion of a Bachelor of Engineering and a Master of Biomedical Engineering within a 5 year period.

Formal graduate courses in Biomedical Engineering are offered. These are: the Master of Biomedical Engineering, the Master of Engineering Science in Biomedical Engineering, and the Graduate Diploma in Biomedical Engineering. Opportunities are provided for graduate research leading to the award of the degrees of Master of Science, Master of Engineering and Doctor of Philosophy.

Concurrent Degree Programs

The concurrent degree programs are specifically designed for undergraduate students wishing to pursue a career in Biomedical Engineering. These programs allow students to enter an integrated course which provides both the prerequisite engineering education and the specialist Biomedical Engineering training.

Biomedical Engineering is available in concurrent degrees with Mechanical Engineering, Mechatronic Engineering, Electrical Engineering, Computer Engineering, Software Engineering, Chemical Engineering, Materials Science, Telecommunications Engineering, and Bioinformatics

Students are expected to perform at a Credit average (65%) or better in their first three years to be permitted to progress to the Masters component of a concurrent degree program. Students who at the end of Year 3, do not satisfy the requirements for progression to the Masters component may complete the Bachelor of Engineering. At the completion of the Bachelor of Engineering, students may enrol in the Graduate Diploma in

Biomedical Engineering with advanced standing for biomedical subjects previously completed.

Students may elect at any time to revert to the BE program. If, once entering a concurrent degree program, students wish to revert to the normal BE programs they will need to satisfy the requirements for the BE as set out in the relevant sections of this Handbook. Since the concurrent degree programs introduce subjects additional to those in the BE, the student reverting to the normal BE program may require up to an additional year to achieve a BE after completing years 3 or 4 of the concurrent degree program.

Professional Recognition

The Institution of Engineers, Australia, recognises the Bachelor of Engineering components of the BE/MBiomedE courses as meeting the examination requirements for admission to graduate and corporate membership. In addition, examination requirements are met for membership of the Institution's College of Biomedical Engineering. The degrees are accorded substantial or complete recognition by overseas engineering institutions.

Please note: Most undergraduate programs in the Faculty of Engineering are currently under revision, subject to approval by the University Council. Students commencing in 2006 should refer to the Online Handbook (www.handbook.unsw.edu.au) for up-to-date information about program structures.

Bachelor of Engineering Master of Biomedical Engineering

BE MBiomedE

Please contact Biomedical Engineering or go to the Biomedical Engineering website (www.gsbme.unsw.edu.au) for specific information on the concurrent degrees:

3757 Bachelor of Engineering (Bioinformatics)/Master of Biomedical Engineering

3048 Bachelor of Engineering (Chemical Engineering)/Master of Biomedical Engineering

3728 Bachelor of Engineering (Computer Engineering)/Master of Biomedical Engineering

3727 Bachelor of Engineering (Electrical Engineering)/Master of Biomedical Engineering

3138 Bachelor of Engineering (Materials Science)/Master of Biomedical Engineering

3683 Bachelor of Engineering (Mechanical Engineering)/Master of Biomedical Engineering

3688 Bachelor of Engineering (Mechatronic Engineering)/Master of Biomedical Engineering

3749 Bachelor of Engineering (Software Engineering)/Master of Biomedical Engineering

3723 Bachelor of Engineering (Telecommunications Engineering)/Master of Biomedical Engineering

Courses offered in each program can be found listed under the relevant undergraduate teaching school.

Further Study

Postgraduate coursework programs in Biomedical Engineering are also offered. These are the Master of Biomedical Engineering, the Master of Engineering Science in Biomedical Engineering, and the Graduate Diploma in Biomedical Engineering.

Biomedical Engineering research programs offerings are the Master of Science, Master of Engineering and PhD. Research areas can be found listed in the Postgraduate Handbook or on the school website: www.gsbme.unsw.edu.au

Faculty of Law

A Message from the Dean

Welcome to the UNSW Law Faculty. The Law Faculty is committed to teaching and scholarly excellence within a setting of social responsibility. We are also dedicated to preserving the highest levels of student satisfaction in their legal and taxation education.

A Distinctive Faculty

The UNSW Law Faculty has a number of important distinguishing features. The Faculty believes that intellectual and social development is best honed when student views are recognised, appreciated and shared.

The Law School, from its inception, began a new tradition of teaching in Australia: interactive teaching and learning in small groups. This mode has since become a model in other law faculties as well. We believe that teaching in small groups of around 40 students stimulates the educational process. The result is a more robust and sharpened learning environment that helps students to develop superior powers of legal analysis.

Our Tax School, Atax, offers a unique distance education program in taxation that is consistent with small group teaching. Our specialised legal centres provide hands-on small group interaction in which students can learn about human rights, indigenous legal rights, constitutional and comparative law, and financial, consumer and youth law. Our library staff further complement small group teaching with their own strong backgrounds in research and service. Last, but not least, our law student representatives actively engage in Law Faculty governance on key committees and in day-to-day administration of Faculty affairs.

An Educational and Professional Environment

Legal education at UNSW reflects two parallel traditions. It combines the tradition of a university education with the professional education of lawyers and those engaged in the taxation profession. While these two traditions are sometimes viewed as disparate, the UNSW Law Faculty treats them as complementary, indeed as mutually reinforcing. We stress the virtue of exploring and applying ideas both as a matter of intellectual inquiry and in applying legal principles to diverse social contexts.

We also hold that a legal education is intended to expose students to social responsibility in its diverse manifestations. We recognise such social responsibility variously, such as by requiring students to participate in the work of the Kingsford Legal Centre (the Faculty's community legal centre).

We believe, too, that social and legal institutions are mirrored in diversity, not in the pre-emptive interests of any one social group to the exclusion of all others. The UNSW Law Faculty provides education in human rights and consumer law. It also does so in corporate and commercial law. Legal education is a tapestry of difference, not of monolithic uniformity.

We invite you to join us at the UNSW Law Faculty. We challenge you to question tried and tested ideas. We encourage you to study through discourse and to learn by example. Legal education at UNSW is concerned, not only with higher values, but also with applying them in an ethical, coherent and ultimately, sustainable manner.

Leon Trakman, SJD (Harvard)
Dean and Professor of Law
Faculty of Law

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School of Law

Information and Assistance

Who Can Help?

If you require advice about enrolment, degree requirements, progression within programs or information about course content and requirements, contact the School of Law Student Administration Office.

Please refer to the School of Law homepage for timetables and general information: www.law.unsw.edu.au

Advanced Standing

The policy of the School of Law is to grant credit for courses which have been successfully completed in another School of Law where those courses, in the opinion of the School, are equivalent in content and depth to comparable courses at UNSW. Applicants who have completed a full law degree in another country are normally granted credit equivalent to one third of the UNSW degree. All matters regarding credit are at the discretion of the School.

Computing Information

The School of Law manages a multimedia computer laboratory equipped with 26 PCs for instructional purposes. In addition, law students have access to two multimedia computer workspaces which contain 15

networked computers and smart-card controlled laser printers. Research students have access to two dedicated computer workspaces equipped with 21 multimedia computers and printing facilities. The School maintains a World Wide Web server, a CD-ROM server and a document scanning and Character Recognition facility. All students have access to a range of research tools from the computer desktops including email, online and CD-ROM based national and international legal databases, library catalogues and World Wide Web access. For more information, please refer to the booklet 'IT Resources for Students' or visit the website at www.law.unsw.edu.au

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

Enrolment Procedures

Continuing Students

Continuing students should follow the procedures publicised at the end of the year.

New Students

New students are informed of enrolment procedures at the time of offer.

Full-time Status

The majority of Law programs are full-time and require attendance at classes four days per week. Students are reminded that a full-time program is intended for students who devote the principal part of their available time to their program. Any additional commitment, in the form of paid work, training for sport at a significant level of achievement or voluntary work in community organisations, is bound to have an effect on a student's work. Past experience shows that additional commitments beyond 10–15 hours per week almost invariably have an adverse effect on student performance and in some cases have led directly to failure. Students are strongly advised that, if an outside commitment of this order is likely to be maintained consistently over a session, the commitment should be discussed in advance with the Associate Dean (Undergraduate). It should be noted, however, that it is the individual teachers who determine whether outside commitments should constitute grounds for consideration in meeting the requirements of particular courses.

Part-time Status

Students undertaking the part-time program for Bachelor of Laws are expected to attend classes on two afternoons per week during the academic year, usually between 2pm and 8pm on Day 1 and 2pm and 6pm on Day 2.

General Education Requirements

Law students enrolled in the Bachelor of Jurisprudence Bachelor of Laws program must complete General Education requirements. All other law students are deemed to have satisfied the General Education requirement. Detailed information about General Education courses is available in the General Education section of this Handbook.

Guidelines for Maximum Workload

The sequence of study for each program is set out under 'Program Rules and Information' in this section of the Handbook. Any student wishing to vary their program (law or non-law) by enrolling in a reduced program or in courses which do not conform to the normal sequence, must seek approval from the Associate Dean (Undergraduate).

Undergraduate students wishing to overload must submit an 'Overload Request' form at the Student Administration Enquiry Counter. Permission can only be given on the basis of a written application in advance of the relevant session.

Rules for Progression

The School of Law uses a range of assessment methods to assess students. These vary from course to course and include formal examinations, take-home examinations, research projects, class participation, essays and moots (mock trials).

Progression in programs is generally dependent on the successful completion of prerequisites and corequisites for courses as listed in the schedules of courses for each program. Students are required to have completed 84 units of credit of core Law courses before enrolling in any elective course.

Where the academic record of students is not of a satisfactory standard, the Associate Dean (Undergraduate) may recommend a restricted program. This applies to all undergraduate programs offered by the Faculty.

Cross-Institutional Studies and Exchange Programs

Students enrolled at UNSW may be permitted to undertake some studies at overseas (exchange) or interstate institutions (cross-institutional studies) provided that they are equivalent in content and depth to comparable courses at UNSW.

Courses which have been successfully completed at another law school (either in Australia or overseas) may be credited to the student's degree up to a maximum of 48 UOC.

The School participates in several overseas exchange programs, and encourages students to take advantage of these. Information regarding these programs can be obtained from the administrative staff.

Students should discuss their plans for cross-institutional studies with the appropriate student advisor in order to determine both their eligibility to undertake such studies and the 'credibility' of the courses under consideration.

Financial Assistance to Students

Full-time students within the School of Law in need of temporary financial assistance, at any time during their studies, should be aware of the existence of certain grants and loans sponsored by some Sydney law firms. Students who feel they may need assistance of this type are invited to discuss their requirements on a strictly confidential basis with the Dean.

Professional Associates

In addition to full-time teaching staff in the School of Law, each year there are a small number of distinguished members of the legal profession in NSW who work in close association with full-time teachers. They participate in all aspects of the presentation of programs covered by their professional specialisation.

Student Representatives

Each year in October up to nine students are elected to membership of the Faculty for the following year. All students enrolled in the Faculty are eligible to stand for election and to vote. Student Members attend School meetings and sit on various Faculty and School Committees.

The Law Society

The Law Society is the students' body which you automatically join on enrolling as a law student. The administration of the Society consists of the Executive and various committees. Members of the Executive and the committees are your representatives within the School of Law. As such they are there to help with problems that may arise such as assessment. They are also there to ensure that an effective student voice is presented to the School.

The Law Society organises social events, careers events, student publications, competitions and various other activities. The social events include first year law camp, Law Ball, harbour cruise, sports events, intervarsity trivia quiz and regular drinks nights and barbecues. The Law Society publishes a magazine with contributions from students, called *Poetic Justice*; a weekly newsletter within the faculty known as *Innominate*; the *Law Annual*; the *Alternative Law Handbook* and careers guides. The Law Society also runs the internal moot, witness examination, client counselling and negotiation competitions. A speakers' forum with guest speakers from the judiciary, legal practitioners and public figures is held every couple of weeks. The Law Society and the Law Faculty also hold an annual Valedictory Dinner. The Society has officers representing the concerns of international and graduate law students and is involved in the Australasian Law Students' Association. All students are welcome to be involved.

Law Society contact details, telephone (02) 9385 2271, email lawsoc@unsw.edu.au, website www.unswlawsoc.org

Summary of Programs

The following programs are available:

Law Programs

Bachelor of Laws (three years full-time), this program is available only to graduates or graduands – program code **4790**

Bachelor of Laws (six years part-time), this program is only available to graduates and people over 21 years of age who have completed the University Preparation Program to the requisite standard – program code **4791**

Jurisprudence Program

Bachelor of Jurisprudence (three years full-time), this program is only available as part of the combined Juris/Law program. Students unable to complete the requirements for the combined degree may apply to graduate with a BJuris.

Combined Programs

Bachelor of Architecture and Bachelor of Laws (seven years full-time) – program code **4705**

Bachelor of Art Theory and Bachelor of Laws (five years full-time) – program code **4703**

Bachelor of Arts and Bachelor of Laws (five years full-time) – program code **4760**

Bachelor of Arts (Media and Communications) and Bachelor of Laws (five years full-time) – program code **4764**

Bachelor of Commerce and Bachelor of Laws (five years full-time) – program code **4733**

Bachelor of Economics and Bachelor of Laws (five years full-time) – program code **4744**

Bachelor of Engineering and Bachelor of Laws (six years full-time) – program codes **4775** and **4777**

Bachelor of International Studies and Bachelor of Laws (six years full-time) – program code **4765**

Bachelor of Jurisprudence and Bachelor of Laws (five years full-time) – program code **4780**

Bachelor of Planning and Bachelor of Laws (seven years full-time) – program code **4707**

Bachelor of Science and Bachelor of Laws (five years full-time) – program code **4770**

Bachelor of Social Science and Bachelor of Laws (five years full-time) – program code **4761**

Bachelor of Social Work and Bachelor of Laws (six years full-time) – program code **4785**

Admission to Combined Programs

Students who satisfy the entry requirements may enter the combined programs directly in Year 1. Alternatively, students may apply to transfer into a combined law degree after the completion of one year of study (48 units of credit). Admission is based on a combination of UAI score and tertiary results.

Program Transfers: Students enrolled in combined law programs who discover they have made a wrong choice of program should consult a student advisor in the School of Law as soon as possible. It is sometimes possible to effect changes without seriously affecting progress in the new program; the earlier the change can be made, the easier the transition.

Program Rules and Information

School of Law

4790 Bachelor of Laws (Full-time)

LLB

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program enables students who have already completed another degree to obtain the Bachelor of Laws degree.

1. Duration/Award:

The program is a three-year full-time program leading to the award of Bachelor of Laws (LLB).

2. Entry Requirement:

The program is available to graduates or graduands of another Faculty of UNSW or another approved university.

3. Attendance Requirement:

This program is full-time and requires attendance at classes for four days per week. A part-time version of this program is available for those students who are unable to study full-time (see program 4791).

Program Objectives and Learning Outcomes

Students will acquire a sound knowledge base in the discipline of Law due to their completion of a sequence of core courses and a wide range of elective courses.

Program Structure

Approved Sequence

There is no assumed knowledge requirement for entry to Faculty of Law courses but students must study law courses in an approved sequence. An approved sequence of courses for the program is set out below; other sequences may be approved in special circumstances.

Year 1

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Year 2

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law elective		(4 UOC)

Plus ONE of the following courses

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Year 3

Law electives	(48 UOC)
144 UOC	

UOC Distribution	Number of Courses	UOC
Core courses	17	92
Electives	6 x 8 UOC, 1 x 4 UOC	52
Total		144

Academic Rules

Rules Relating to the Bachelor of Laws Program and the Bachelor of Jurisprudence Program

1.(1) The Bachelor of Laws degree may be conferred on the completion of any of the following programs:

- Bachelor of Laws
- Bachelor of Architecture and Bachelor of Laws
- Bachelor of Arts and Bachelor of Laws
- Bachelor of Arts (Asian Studies) and Bachelor of Laws
- Bachelor of Arts (Media and Communications) and Bachelor of Laws
- Bachelor of Art Theory and Bachelor of Laws
- Bachelor of Commerce and Bachelor of Laws
- Bachelor of Economics and Bachelor of Laws
- Bachelor of Engineering and Bachelor of Laws
- Bachelor of International Studies and Bachelor of Laws
- Bachelor of Jurisprudence and Bachelor of Laws
- Bachelor of Science and Bachelor of Laws
- Bachelor of Social Science and Bachelor of Laws
- Bachelor of Social Work and Bachelor of Laws
- Bachelor of Planning and Bachelor of Laws

1.(2) The programs set out in paragraphs (b) to (o) of subrule (1) hereof are referred to in these Rules as 'combined programs', and shall be programs of full-time study of not less than five years' duration.

1.(3) The program leading to the award of the degree of Bachelor of Laws (otherwise than as part of a combined program) shall be either:

(a) a program of part-time study which (unless otherwise approved by the Faculty for special reasons) shall be of not less than six years' duration; or

(b) a program of full-time study of not less than three years' duration, but no student shall be eligible to enrol in such a program unless he or she is a graduate or graduand of any Faculty of the University or another university approved by the Faculty, or has other qualifications or experience deemed acceptable by the Faculty.

2. No person shall be permitted to enrol in any program in the Faculty of Law at the same time as he or she is enrolled for any other degree or diploma in the University or elsewhere, except as may be necessary to complete the requirements of a combined program, or with the approval of the Faculty.

3. Where, in these Rules, reference is made to the requirement that a candidate shall complete a program, the requirement shall be construed as meaning that the candidate shall:

3.(1) attend such lectures, seminars, tutorials or other classes, and such court sessions, offices or institutions as may be prescribed in that program, and maintain a satisfactory standard of preparation for and participation in such classes and activities;

3.(2) perform satisfactorily in such exercises, essays, theses and other work (whether written, oral or practical) as may be prescribed in that program and undertake any prescribed reading related to that program; and

3.(3) attain a satisfactory standard in the examination or examinations, and such other means of assessment of a candidate's results in that program as the Faculty may prescribe.

4. The Faculty of Law shall specify a number of units of credit in respect of each Law course for which credit is given in the award of the degree of Bachelor of Jurisprudence or the degree of Bachelor of Laws (whether taken separately or as part of a combined program). On completion of the course, a candidate shall be credited with the specified number of points.

5.(1) Compulsory Courses

In the case of the Bachelor of Laws degree program credit shall be given for the courses set out in the following table, each of which shall, unless otherwise determined by the Faculty, carry the number of units of credit (if any) specified.

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)
LAWS1061	Torts	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS1072	Contracts 2	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS2140	Public Law	(3 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Total Units 92UOC

5.(2) Compulsory Course Changes

In 1993 the Faculty made changes to Contracts and introduced a new compulsory course - Public Law. These changes do not affect students who entered the School of Law prior to 1994.

In 1995 the Faculty added LAWS4010 Business Associations 1 to the compulsory core courses in order to meet the uniform national admission requirements. This change does not affect students who entered the School of Law prior to 1996.

From 2003 onwards LAWS1051 Legal System and LAWS7410 Legal Research and Writing will be replaced by LAWS1052 Foundations of Law. These changes do not affect students who entered the School of Law prior to 2003.

5.(3) Elective Courses

The following is a list of all approved electives. Approximately 25-30 electives are made available each session. The number of students that may take an elective may be limited.

LAWS2282	Advanced Administrative Law	(8 UOC)
LAWS2025	Advanced Contract Law	(8 UOC)
LAWS1002	Advanced Criminal Law	(8 UOC)
LAWS2333	Advanced Legal & Social Theory	(8 UOC)
LAWS2052	Advanced Revenue Law	(8 UOC)
LAWS2272	Australian Immigration Law and Practice	(8 UOC)
LAWS2212	Australian Indigenous Law Reporter	(8 UOC)
LAWS2183	Australian Journal of Human Rights	(8 UOC)
LAWS1092	Business Associations 2	(8 UOC)
LAWS2392	Children and the Law	(8 UOC)
LAWS2123	Chinese Legal System	(8 UOC)
LAWS2303	Clinical Legal Experience (Intensive)	(16 UOC)
LAWS2304	Clinical Legal Experience	(8 UOC)
LAWS2305	Clinical Program	(16 UOC)
LAWS2026	Commercial and Consumer Sales	(8 UOC)
LAWS2024	Commercial Finance	(8 UOC)
LAWS2110	Comparative Constitutional Law	(8 UOC)
LAWS2085	Comparative Law	(8 UOC)
LAWS2082	Conflict of Laws	(8 UOC)
LAWS2293	Constitutionalism	(8 UOC)
LAWS2037	Consumer Protection Law	(8 UOC)
LAWS1003	Crime and Society	(8 UOC)
LAWS2411	Disability, Rights and the Law	(8 UOC)
LAWS2412	Discrimination and the Law	(8 UOC)
LAWS2314	Dispute Resolution	(8 UOC)
LAWS2335	Economic Analysis of Law	(8 UOC)
LAWS2051	Elements of Income Tax Law	(8 UOC)
LAWS2032	Employment Protection Law	(8 UOC)
LAWS2361	Environmental Law	(8 UOC)
LAWS2313	Evidence and Advocacy	(8 UOC)
LAWS2316	Expert Evidence	(8 UOC)
LAWS2394	Families, Property & Death	(4 UOC)
LAWS2391	Family Law	(8 UOC)
LAWS2155	Federal Constitutional Law	(8 UOC)
LAWS2341	Feminist Legal Theory	(8 UOC)
LAWS2401	Health and Medical Law	(8 UOC)
LAWS2413	Housing Law	(8 UOC)
LAWS2182	Human Rights Law	(8 UOC)
LAWS2021	Industrial and Intellectual Property	(8 UOC)
LAWS2027	Industrial Law	(8 UOC)
LAWS1031	Information Technology Law	(8 UOC)
LAWS2088	International Advocacy	(8 UOC)
LAWS9988	International Business Transactions	(8 UOC)
LAWS2181	International Humanitarian Law	(8 UOC)
LAWS2086	International Law Moot	(8 UOC)
LAWS2084	International Trade Law	(8 UOC)
LAWS2091	Introduction to Space Law	(4 UOC)
LAWS2090	Issues in Space Law	(8 UOC)
LAWS2241	Jewish Law	(8 UOC)
LAWS2035	Land Dealings	(8 UOC)
LAWS2232	Law After Communism	(8 UOC)
LAWS2332	Law and Social Theory	(8 UOC)
LAWS2441	Law Journal	(8 UOC)
LAWS2033	Law of Banking	(8 UOC)
LAWS2251	Legal History	(8 UOC)
LAWS2331	Legal Theory	(8 UOC)
LAWS2031	Occupational Health and Safety Law	(8 UOC)
LAWS1005	Penology	(8 UOC)
LAWS2081	Public International Law	(8 UOC)
LAWS2275	Regulation of Economic Activity	(8 UOC)
LAWS2301	Remedies	(8 UOC)
LAWS2421	Research Project	(2 UOC)
LAWS2423	Research Thesis	(8 UOC)
LAWS2422	Research Thesis: 16 UOC	(16 UOC)
LAWS2079	Restitution	(8 UOC)
LAWS2307	Social Justice Intern Program	(8 UOC)
LAWS2414	Social Security Law	(8 UOC)
LAWS1812	Sport and the Law	(8 UOC)
LAWS2315	Strategic Public Advocacy	(8 UOC)
LAWS2393	Succession	(8 UOC)
LAWS1006	The Criminal Appeals Project	(8 UOC)
LAWS2323	The Criminal Trial	(4 UOC)
LAWS2292	The High Court of Australia	(8 UOC)
LAWS2028	The Law of Employment	(8 UOC)

LAWS2022	Trade Practices	(8 UOC)
LAWS2312	Trial Process	(8 UOC)
LAWS2023	Trusts	(8 UOC)

and any other courses specified by the Faculty.

5.(4) Postgraduate Electives Available to Undergraduates

The Faculty has determined that, with the permission of the Associate Dean and the course teacher, undergraduate students may enrol in one or more courses offered in the Master of Laws by Coursework degree. The units of credit so earned shall be the same as are specified in the Course Descriptions for the Master of Laws.

General guidelines: Students may apply to enrol in an LLM course provided they:

- have completed all compulsory courses;
- have completed any prerequisites;
- are within the last two years of their program;
- have no failures in the last two years;

Such courses shall be taken in a sequence approved by the Faculty.

6. Bachelor of Laws: A candidate for the award of the degree of Bachelor of Laws (whether taken as part of a combined program or as a separate degree) shall complete:

6.(1) all of the courses prescribed in Rule 5 under the heading 'Compulsory Courses', totalling 92 units of credit,

6.(2) selected courses from the courses prescribed in Rule 5 under the heading 'Elective Courses' so as to comply with Rule 7,

6. (3) such Legal Research and Writing Programs, Prescribed Readings in Law, Moot Court Work and other work as the Faculty may require.

7. (1) Total Units of Credit: A candidate for the award of the degree of Bachelor of Laws shall complete Elective Courses prescribed in Rule 6 to the extent necessary to bring his or her total units of credit for Compulsory and Elective Law Courses to:

(a) **Total: 144 UOC (Core: 92 UOC; Electives: 52 UOC)**

- Bachelor of Architecture Bachelor of Laws
- Bachelor of Engineering (Civil) Bachelor of Laws
- Bachelor of Engineering (Environmental) Bachelor of Laws
- Bachelor of Town Planning Bachelor of Laws
- Bachelor of Laws

(b) **Total: 144 - 150 UOC (Core: 92 UOC; Electives: 52 - 58 UOC)**

- Bachelor of Social Work Bachelor of Laws

(c) **Total: 150 UOC (Core: 92 UOC; Electives: 58 UOC)**

- Bachelor of Social Science Bachelor of Laws

(d) **Total: 156 UOC (Core: 92 UOC; Electives: 64 UOC)**

- Bachelor of Arts Bachelor of Laws
- Bachelor of Commerce Bachelor of Laws
- Bachelor of Economics Bachelor of Laws

(e) **Total: 150 UOC (Core: 92 UOC; Electives: 56 - UOC; Research Project 2 UOC)**

- Bachelor of Art Theory Bachelor of Laws
- Bachelor of Science Bachelor of Laws

(f) **Total: 156 - 174 UOC (Core: 92 UOC; Electives: 64 - 82 UOC)**

- Bachelor of Jurisprudence Bachelor of Laws

7. (2) Approval: A candidate's choice of Elective Courses shall require the approval of the Faculty.

8. Combined Program: A candidate for the award of the degree of Bachelor of Laws as part of a combined program shall not be eligible to be awarded that degree until he or she has completed the additional requirements applicable to the other degree.

9. Bachelor of Jurisprudence/Bachelor of Laws: In the case of the combined program leading to the award of the degrees of Bachelor of Jurisprudence and Bachelor of Laws, the requirement for the award of the Bachelor of Jurisprudence degree shall be:

(i) Completion of all requirements of the Bachelor of Laws degree program (including Law courses totalling not less than 156 units of credit).

(ii) Completion of a minimum of 54 units of credit of courses in another Faculty or Faculties comprising (unless specially approved by the Faculty) a major sequence of three years' study comprising 42 units of credit, plus an additional first year course comprising 12 units of credit. Unless he or she obtains special permission from the relevant Head of School, a

student shall be bound by any requirements as to course prerequisites normally applicable to a course in another Faculty.

(iii) Completion of electives totalling 24 units of credit of electives selected from either the Faculty of Law or another Faculty.

(iv) Completion of General Education courses totalling 6 units of credit

(v) A candidate shall obtain the approval of the Faculty of Law for the selection, and sequence of study, of courses in other Faculties. In approving such courses, the Faculty shall have regard to the contribution the study of such courses may reasonably be expected to make to the development of the candidate's capacity as a lawyer and understanding of the law.

10. Bachelor of Jurisprudence: The requirement for the award of the Bachelor of Jurisprudence degree shall be:

(i) completion of a program of full-time study of not less than three years' duration comprising law courses totalling not less than 78 units of credit and including the following compulsory courses totalling 54 units of credit:

Year 1

LAWS1052	Foundations of Law	6 UOC
LAWS1061	Torts	6 UOC
LAWS1071	Contracts 1	6 UOC
LAWS1072	Contracts 2	3 UOC
LAWS2140	Public Law -	3 UOC

Year 2

LAWS1001	Criminal Law 1	6 UOC
LAWS1011	Criminal Law 2	6 UOC
LAWS2160	Administrative Law	6 UOC
LAWS6210	Law, Lawyers & Society	6 UOC

Year 3

LAWS8320	Legal Theory	6 UOC,
or		
LAWS8820	Law and Social Theory	6 UOC

(ii) Completion of a minimum of 54 units of credit of courses in another faculty or faculties comprising (unless specially approved by the Faculty) a major sequence of three years' study comprising 42 units of credit, plus an additional first year course comprising 12 units of credit. The candidate shall be bound by any requirements as to course prerequisites normally applicable to a course in another faculty.

(iii) Completion of General Education courses totalling 12 units of credit.

(iv) A candidate shall obtain the approval of the Faculty of Law for the selection, and sequence of study, of courses in other faculties. In approving such courses, the Faculty shall have regard to the contribution the study of such courses may reasonably be expected to make to the development of the candidate's capacity as a lawyer and understanding of the law.

11. Part-Time Study: A student shall not be enrolled as a part-time student unless he or she satisfies the Faculty that his or her special circumstances preclude full-time study, and that his or her previous experience and/or study make it appropriate to admit him or her to part-time study for the award of the degree of Bachelor of Laws as a separate degree.

12. Faculty: In these Rules, unless the contrary is indicated, 'the Faculty' means the Faculty of Law.

4791 Bachelor of Laws (Part-time)

LLB

Typical Duration

6 years part-time

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program enables students who have already completed another degree to obtain the Bachelor of Laws degree on a part-time study basis. The program covers all the foundation areas of Law in theory and practice.

Duration/Award

The program is a six-year part-time program leading to the award of Bachelor of Laws and satisfies academic requirements for admission to practice.

Entry Requirements

The program is only available to graduates and people over 21 years of age who have completed the University Preparation Program. The program is not available to people who proceed directly from the Higher School Certificate.

Attendance Requirements

The program involves attendance at the Kensington campus on two afternoons a week.

Electives

The courses of the LLB degree program are set out in Rule 5 of the Academic Rules, please refer to entry for 4790 Bachelor of Laws. However, it will not be possible to provide the full range of electives at times convenient to part-time students.

Approved Sequence of Study

Students must study law courses in an approved sequence. An approved sequence of courses for the program is set out below; other sequences may be approved in special circumstances.

Transfer to the Full-Time Program

Students enrolled in program 4791 (part-time) are eligible to apply to transfer to 4790 (full-time) after completing 48 units of credit in the part-time program.

Program Objectives and Learning Outcomes

This program aims to provide students with a firm foundation of knowledge relating to the theory and practice of Law.

Program Structure

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 2

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)

Year 3

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)

Year 4

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(4UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Year 5

Law electives	(24UOC)

Year 6

Law electives	(24UOC)

UOC Distribution	Number of Courses	UOC
Core courses	17	92
Electives	6 x 8 UOC, 1 x 4 UOC	52
Total		144

Academic Rules

For Academic Rules relating to the Bachelor of Laws program, please refer to the entry for 4790 Bachelor of Laws.

4780 Bachelor of Jurisprudence Bachelor of Laws

BJuris LLB

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program combines the professional Bachelor of Law (LLB) program with the Bachelor of Jurisprudence (BJuris).

The BJuris degree is available either as part of the combined Jurisprudence/Law program or an "exit degree" for students who decide after admission not to proceed with an LLB degree. It is not available as a separate pass degree for admission purposes. Students wishing to graduate with a BJuris must satisfy the requirements as listed in Rule 10 of the Academic Rules (see refer to the entry for 4790 Bachelor of Laws).

The Bachelor of Jurisprudence, unlike the LLB degree, is not designed to provide a qualification for the professional practice of law. It provides a basic knowledge of law, an opportunity to study selected legal courses of special interest, and significant study in other faculties. Various combinations of non-law courses are possible and the program may be moulded to meet various vocational ends, eg for industrial officers or advocates, public servants, business executives or law librarians.

Teaching methods in Law courses are the same as in the LLB program.

Duration/Awards

The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Jurisprudence and Bachelor of Laws (BJuris LLB).

Assumed Knowledge

Students must satisfy any assumed knowledge requirements (but not general Faculty assumed knowledge requirements) for courses studied in other faculties.

Non-Law Courses

The non-law courses shall include, unless otherwise approved, a major sequence of 42 units of credit approved by the faculty offering the major sequence. There is an additional requirement of 12 units of credit of non-law courses.

Students are required to obtain the approval of the Faculty of Law for their proposed program of non-law courses and the order in which they are to be studied. In approving such courses, the Faculty shall have regard to the contribution the study of such courses may reasonably be expected to make to the development of his or her capacity as a lawyer and understanding of the law.

BJuris

Candidates may be awarded the degree of Bachelor of Jurisprudence subject to satisfying the requirements as listed in Rule 10 of the Academic Rules, including satisfaction of General Education requirements for the single pass degree (12 units of credit).

Approved Sequence of Study:

Students must study non-law courses in a sequence approved by the non-law faculty and the Faculty of Law, and law courses in a sequence approved by the Faculty of Law. Approved sequences for each combined program are given below; other sequences may be approved under special circumstances.

Program Objectives and Learning Outcomes

On completion of this combined degree program, students should have attained a basic knowledge of the theory and practice of law.

Program Structure

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
Non-Law Major Sequence Year 1 (2 x 6 UOC)		(12 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Additional Non-Law Courses (2 x 6 UOC)		(12 UOC)

Year 2

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Non-law Major Sequence Year 2		(12 UOC)

Year 3

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
Non-Law Major Sequence Year 3		(24 UOC)
General Education courses		(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Year 4

LAWS2311	Litigation 1	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)
Law or non-law electives		(18 UOC)

Year 5

Law electives		(48 UOC)

UOC Distribution	Number of Courses	UOC
Law		156
Core courses	17	92
Electives	8 x 8 UOC	64
Non-Law		60
Major Sequence	8 x 6 UOC	48
Additional Courses	2 x 6 UOC	12
General Education	2 x 3 UOC	6
Law or Non-Law Electives		18
3 Non-Law electives (18 UOC) or 2 Law electives (16 UOC), plus Law research project (2 UOC)		
Total		240

General Education Requirements

Candidates for the BJuris LLB must complete 6 units of credit of General Education. BJuris LLB is the only combined law degree which has a General Education requirement.

For further information, please refer to General Education section in this Handbook.

Academic Rules

For Academic Rules relating to the Bachelor of Laws program, please refer to the entry for 4790 Bachelor of Laws.

Faculty of Arts & Social Sciences and Faculty of Law

4760 Bachelor of Arts Bachelor of Laws

BA LLB

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program gives students the maximum freedom to follow their interests in the Faculty of Arts and Social Sciences. The Law courses satisfy the requirements for the award of the professional LLB degree.

Areas of specialisation for the Bachelor of Arts include: Australian Studies, Chinese Studies, Cognitive Science, Development Studies, Education, English, Environmental Studies, European Studies, Film, French, German Studies, Greek (Modern), History, History and Philosophy of Science, Indonesian Studies, Italian, Japanese Studies, Jewish Studies, Korean Studies, Linguistics, Media, Culture and Technology, Music, Philosophy, Political Economy, Politics and International Relations, Russian Studies, Policy Studies, Sociology and Anthropology, Spanish and Latin American Studies, Theatre & Performance Studies, Women's and Gender Studies.

Assumed Knowledge

Students must satisfy the normal assumed knowledge requirements for entry to the Faculty of Arts and Social Sciences, and to individual courses in that faculty.

Program Objectives and Learning Outcomes

In a world where people increasingly have a number of career shifts in their lifetime, humanities and social science graduates possess a unique combination of intellectual and analytical skills which can be readily transferred from one occupation to another. Someone planning a career in policy making, diplomacy, international relations or legal practice will find the BA LLB an excellent preparation.

Program Structure

Program Structure	240 UOC
Law courses	156 UOC
Arts & Social Science Courses	84 UOC
Law Courses	156 UOC
Core courses	92 UOC
Electives (8 courses x 8 UOC)	64 UOC

The core courses are taken in a specified sequence during Years 1 to 4, see approved sequence of study below.

After completing the majority of the core courses students are eligible to enrol in electives in Years 4 and 5. For a list of approved Law electives, please refer to the Academic Rules section in the entry for 4790 Bachelor of Laws.

Arts & Social Science Courses 84 UOC

Students must complete a total of 84 units of credit of approved Arts & Social Sciences courses from at least three schools or programs. The 84 UOC must include:

- Plan/major sequence from one school or program 42 UOC
- at least two upper level courses from other schools or programs 12 UOC
- other courses approved by the Faculty of Arts & Social Sciences 30 UOC

A few majors, e.g. Jewish Studies, comprise only 36 UOC. Students selecting such a major will bring their total UOC to 84 by completing an additional 6 UOC course approved by the Faculty of Arts & Social Sciences.

Arts & Social Science Specialisations

For details of the available specialisations and approved major sequences, please refer to Lists A & B of the Academic Rules in the program entry for 3400 Bachelor of Arts (see Arts and Social Sciences entry in this Handbook).

Sequence of Study

Students must study Arts courses in a sequence approved by the Faculty of Arts & Social Sciences and Law courses in a sequence approved by the School of Law. Other sequences may be approved under special circumstances.

Year 1

Session One

LAWS1052 Foundations of Law	(6 UOC)
Arts School A – Level 1 course	(6 UOC)
Arts School B – Level 1 course	(6 UOC)
Arts School C – Level 1 course	(6 UOC)

Session Two

LAWS1061 Torts	(6 UOC)
Arts School A – Level 1 course	(6 UOC)

Arts School B – Level 1 course	(6 UOC)
Arts School C – Level 1 course	(6 UOC)

Year 2

Session One

LAWS1001 Criminal Law 1	(6 UOC)
LAWS1071 Contracts 1	(3 UOC)
LAWS2140 Public Law	(3 UOC)
Arts School A - Upper Level courses	(6 UOC)
Arts School B - Upper Level courses	(6 UOC)

Session Two

LAWS1011 Criminal Law 2	(6 UOC)
LAWS1072 Contracts 2	(6 UOC)
Arts School A - Upper Level courses	(6 UOC)
Arts School B - Upper Level courses	(6 UOC)

Year 3

Session One

LAWS1081 Property, Equity and Trusts 1	(6 UOC)
LAWS2160 Administrative Law	(6 UOC)
Arts - Upper Level courses	(12 UOC)
(including courses required to complete a major)	

Session Two

LAWS1082 Property & Equity 2	(6 UOC)
LAWS6210 Law, Lawyers & Society	(6 UOC)
Arts - Upper Level courses	(12 UOC)
(including courses required to complete a major)	

Year 4

Session One

LAWS2150 Federal Constitutional Law	(6 UOC)
LAWS2311 Litigation 1	(6 UOC)
LAWS4010 Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320 Legal Theory	(6 UOC)
LAWS8820 Law & Social Theory	(6 UOC)

Session Two

LAWS2321 Litigation 2	(6 UOC)
LAWS7420 Advanced Legal Research	(2 UOC)
Law electives	(16 UOC)

Year 5

Session One

Law electives	(24 UOC)

Session Two

Law electives	(24 UOC)

**If a major is selected which requires less than 42 units of credit students will be expected to make up the shortfall by completing another elective approved by the Faculty of Arts & Social Sciences.*

UOC Distribution	Number of Courses	UOC
Arts & Social Science		84
Major sequence	7 x 6 UOC	42*
2 Upper level courses	2 x 6 UOC	12
5 other approved courses	5 x 6 UOC	30
Law		156
Core courses	17	92
Electives	8 x 8 UOC	64
Total		240

Graduation

Students who find they are unable to complete the combined degree may apply to transfer to the single BA program with credit for all courses completed.

General Education Requirements

Students enrolled in combined law degrees are not required to complete General Education courses.

Honours

Students wishing to take the BA degree program at Honours level must obtain prior approval from the relevant schools in the Faculty of Arts and Social Sciences and the Faculty of Law. At least one and possibly two additional years of study are required. Alternatively students may consider

completing the BA degree program at Honours level (4 years) and then seeking admission to the three year LLB degree program for graduates.

4761 Bachelor of Social Science Bachelor of Laws

BSocSc LLB

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program provides an opportunity to obtain two degrees of professional importance to the public sector, community service, business and law practice. In addition, the student has the option to work towards a research career in a variety of disciplines.

Duration/Award

The program is of five years full-time study leading to the award of the two degrees of Bachelor of Social Science and Bachelor of Laws (BSocSc LLB).

Assumed Knowledge

Students must satisfy the normal assumed knowledge requirements entry to the Faculty of Arts and Social Sciences, and to individual courses in that faculty.

BSocSc

Students not wishing to proceed to the combined degree BSocSc LLB, may transfer to the BSocSc degree program with credit for all courses completed.

BSocSc Core Courses

The first three years of the program includes the Bachelor of Social Science core program totalling 48 units of credit.

Arts & Social Science Major

1. Students must also complete an approved major sequence in the Faculty of Arts and Social Sciences. The major sequence must be taken in one of the following schools: Economics/Economic History, Film, Geography, Geology, History, History and Philosophy of Science, Human Resource Management, Industrial Relations & Organisational Behaviour, International Business, Philosophy, Politics & International Relations, Psychology, Sociology & Anthropology, Spanish and Latin American Studies (History), Theatre & Performance Studies.

2. Most major sequences are made up of 42 units of credit; however some require only 36 units of credit. If a 36 unit of credit major is selected, students will be expected to make up the 6 unit of credit shortfall by completing either an additional elective approved by the Faculty of Arts & Social Sciences or by completing an additional law elective. (This will bring the total units of credit of law electives to 64)

Program Objectives and Learning Outcomes

At completion of this program, students will have attained a sound knowledge base in the fields of both Law and Social Science.

Program Structure

Approved Sequence of Study

Students must study Social Science courses in a sequence approved by the Faculty of Arts and Social Science and Law courses in a sequence approved by the Faculty of Law. An approved sequence is given below; other sequences may be approved under special circumstances.

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Select ONE of:

SLSP1000	Social Science and Policy	(6 UOC)
SLSP1002	Introduction to Policy Analysis	(6 UOC)

Plus

Arts & Social Sciences major - Level 1	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
SLSP1001	Research and Information Management	(6 UOC)
Arts & Social Sciences major - Level 1		(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
SLSP2000	Political Economy and the State	(6 UOC)
SLSP2001	Applied Social Research 1	(6 UOC)
Arts & Social Sciences major - Upper Level		(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
SLSP2002	Policy Analysis Case Studies	(6 UOC)
Arts & Social Sciences major - Upper Level		(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
SLSP3000	Social Theory and Policy	(6 UOC)
SLSP3001	Applied Social Research 2	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
SLSP3002	Social Science and Policy Project	(6 UOC)
Arts & Social Sciences major - Upper Level		(12 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)

Plus

Law electives	(16 UOC)

or

Arts & Social Science major (6 UOC) & Law electives (10 UOC)

Year 5

Session One

Law electives	(24 UOC)

Session Two

Law electives	(24 UOC)

UOC Distribution	Number of Courses	UOC
Arts & Social Science		90
BSocSc core courses	8 x 6 UOC	48
Major sequence	7 x 6 UOC	42*
Law		150
Core courses	17	92
Electives	7 x 8 UOC, 1 x 2 UOC	58
Total		240

Honours

Honours in Social Science: Students wishing to take the BSocSc program at Honours level must obtain prior approval from the relevant schools in the Faculty of Arts and Social Sciences and the Faculty of Law. At least one and possibly two additional years of study are required. Alternatively students may consider completing the BSocSc degree program at Honours level (4 years) and then seeking admission to the three year LLB degree program for graduates.

4764 Bachelor of Arts (Media & Communications) Bachelor of Laws

BA(Media) LLB

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program combines the professional Bachelor of Laws with the Bachelor of Arts (Media and Communications).

The Bachelor of Arts (Media and Communications) emphasises new computer-based multimedia skills and focuses on Australian media industries in relation to globalisation. The degree is vocationally relevant in its orientation and all students are given significant practical experience in new computer-based multimedia communications technologies. It aims to develop in students a sophisticated understanding of the history, scope and socio-cultural impact of new media technologies, and of the debates that have accompanied their development and use. Second, it offers extensive experience in the production of new media content appropriate for employment in the contemporary media.

This degree combination would be of interest to students interested in becoming media lawyers, or in the fields of broadcast media (video-based, multi-media production and post production; research, administration and policy analysis for private corporations, telecommunications companies and government departments).

Program Objectives and Learning Outcomes

In addition to studying eight courses in the Media and Communications core program, students complete six courses from List A of the Faculty of Arts and Social Sciences, to permit them to study a second field in depth. Years 1 and 2 cover multimedia writing and production and contextual media studies. Year 3 consolidates the program's emphasis on production and analytical skills. This grounding enables students to interpret, create and apply the products of the new media not only in the context of the mass information and entertainment industries, but also in a variety of other public and private sector areas such as education, on-the-job training and specialised information services.

Program Structure

Law courses	156 UOC
Arts & Social Science Courses	84 UOC
Total	240 UOC

Approved Sequence of Study:

The program is structured to allow concurrent study in the two degrees in the first three years with the last two years dedicated to completing the Law component of the LLB.

Students must study Arts courses in a sequence approved by the Faculty of Arts and Social Sciences and Law courses in a sequence approved by the Faculty of Law. Prior to enrolling in electives students are expected to have completed the majority of the core courses.

The approved sequence of study is given below. Other sequences may be approved under special circumstances.

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
MDCM1000	New Media Technologies A	(6 UOC)
Arts School List A - Level 1		(6 UOC)
Arts School List A - Level 1		(6 UOC)

Session Two

MDCM1001	New Media Technologies B	(6 UOC)
LAWS1061	Torts	(6 UOC)
Arts School List A - Level 1		(6 UOC)
Arts School List A - Level 1		(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)

LAWS2140	Public Law	(3 UOC)
MDCM2000	Writing for New Media	(6 UOC)
MDCM2002	Media Production	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
MDCM2003	Multimedia Production	(6 UOC)
Arts School List A - Upper Level		(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
MDCM3000	Media Forms	(6 UOC)
MDCM3002	Advanced Media Production	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
MDCM3003	Multimedia Production	(6 UOC)
Arts School List A - Upper Level		(6 UOC)

An optional additional Honours year may be taken with the relevant school in the Faculty of Arts and Social Science, before continuing with the courses below.

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2311	Litigation 1	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives	(16 UOC)	

Year 5

Session One

Law electives	(24 UOC)

Session Two

Law electives	(24 UOC)

UOC Distribution	Number of Courses	UOC
Arts & Social Science		84
8 Media & Communications (MDCM) core courses as specified	8 x 6 UOC	48
6 courses from List A (4 x Level 1, 2 x upper level)	6 x 6 UOC	36
Law		156
17 core courses (set sequence in Yrs 1 – 4, no selection required)	17	92
8 electives (Law electives are worth 8 uoc)	8 x 8 UOC	64
Total		240

General Education Requirements

Students enrolled in a combined law degree are not required to complete General Education courses.

Honours

Honours in the BA Program: Students wishing to take the BA(Media) degree program at Honours level must obtain prior approval from the relevant schools in the Faculty of Arts and Social Sciences and the Faculty of Law. At least one and possibly two additional years of study are required. Alternatively students may consider completing the BA degree program at Honours level (4 years) and then seeking admission to the three year LLB degree program for graduates.

4765 Bachelor of International Studies Bachelor of Laws

BInSt LLB

Typical Duration

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program provides an opportunity to obtain two degrees of professional importance to the public sector, community service, business and law practice. The Law courses satisfy the requirements for the award of the professional LLB degree. The International Studies component provides the knowledge and skills essential for understanding and working in the rapidly changing global environment.

The BInSt LLB degree may be taken in one of five areas of specialisation – Asian Studies, Development Studies, European Studies, Global Studies or Language Studies. Features of the degree program include:

- a core sequence of courses in International Studies;
- a choice of one area of concentration from five distinct and integrated programs of study;
- language study;
- access to 12 months study at one of a select group of the best international universities;
- full credit towards the BInSt degree for courses completed overseas;
- financial assistance towards a 12-month period of overseas study.

Program Objectives and Learning Outcomes

This program combines a law degree with one of five international studies streams: **Asian Studies; Development Studies; European Studies; Globalisation and Languages**. The structure of the program differs between the streams but each includes a combination of humanities and social science courses. An overseas study period of two semesters in either the third or fourth year is an essential component of the program - prerequisite to this is satisfactory progress towards the degree in first and second years of study.

Program Structure

Program Structure	288 UOC
Law courses	150 UOC
Core courses	94 UOC
Elective courses	56 UOC

The core courses are taken in a specified sequence during Years 1 to 4. Details are given below. After completing the majority of the core courses students are eligible to enrol in electives in Years 4 and 5.

International Studies	138 UOC
A combination of courses as per plan requirements of each stream	90 UOC
Two semesters of study in an approved program at an o/s institution	48 UOC

General Law sequence (program 4765, plan code LAWSA14765)**Year 1****Session One**

3 x International Studies courses	(18 UOC)
LAWS1052 Foundations of Law	(6 UOC)

Session Two

3 x International Studies courses	(18 UOC)
LAWS1061 Torts	(6 UOC)

Year 2**Session One**

2 x International Studies courses	(12 UOC)
LAWS1001 Criminal Law 1	(6 UOC)
LAWS1071 Contracts 1	(3 UOC)
LAWS2140 Public Law	(3 UOC)

Session Two

2 x International Studies courses	(12 UOC)
LAWS1011 Criminal Law 2	(6 UOC)
LAWS1072 Contracts 2	(6 UOC)

Year 3**Session One**

2 x International Studies courses	(12 UOC)
LAWS1081 Property, Equity and Trusts 1	(6 UOC)
LAWS6210 Law, Lawyers and Society	(6 UOC)

Session Two

International Studies Individual Overseas Study Program A	(24 UOC)

Year 4**Session One**

International Studies Individual Overseas Study Program B	(24 UOC)

Session Two

3 x International Studies courses	(18 UOC)
LAWS1082 Property and Equity 2	(6 UOC)

Year 5**Session One**

LAWS2150 Federal Constitutional Law	(6 UOC)
LAWS2160 Administrative Law	(6 UOC)
LAWS2311 Litigation 1	(6 UOC)
LAWS4010 Business Associations 1	(6 UOC)

Session Two

LAWS2321 Litigation 2	(6 UOC)
LAWS2421 Research Project	(2 UOC)
LAWS7420 Advanced Legal Research	(2 UOC)

Plus ONE of the following courses:

LAWS8320 Legal Theory	(6 UOC)
LAWS8820 Law and Social Theory	(6 UOC)

PLUS

Law elective	(8 UOC)

Year 6**Session One**

Law electives	(24 UOC)

Session Two

Law electives	(24 UOC)

Asian Studies (program 4765, plan code ASIAA14765)**Year 1****Session One**

ASIA1002 Introducing Southeast Asia	(6 UOC)
CHIN (or INDO or KORE or JAPN)	(6 UOC)
INST INST core course – Level 1	(6 UOC)
LAWS1052 Foundations of Law	(6 UOC)

Session Two

ASIA1001 Introduction to Contemporary Asia	(6 UOC)
CHIN (or INDO or KORE or JAPN)	(6 UOC)
INST INST core course – Level 1	(6 UOC)
LAWS1061 Torts	(6 UOC)

Year 2**Session One**

ASIA ASIA or Asia-Related	(6 UOC)
CHIN (or INDO or KORE or JAPN)	(6 UOC)
LAWS2140 Public Law	(3 UOC)
LAWS1071 Contracts 1	(3 UOC)
LAWS1001 Criminal Law 1	(6 UOC)

Session Two

ASIA ASIA or Asia-Related	(6 UOC)
CHIN (or INDO or KORE or JAPN)	(6 UOC)
LAWS1072 Contracts 2	(6 UOC)
LAWS1011 Criminal Law 2	(6 UOC)

Year 3**Session One**

ASIA ASIA or Asia-Related	(6 UOC)
CHIN (or INDO or KORE or JAPN)	(6 UOC)
LAWS1081 Property, Equity and Trusts 1	(6 UOC)
LAWS6210 Law, Lawyers & Society	(6 UOC)

Session Two

INST3101 Individual Overseas Study Program A	(24 UOC)

Year 4**Session One**

INST3102 Individual Overseas Study Program B (24 UOC)

Session Two

INST INST core course – Level 4 (6 UOC)

ASIA ASIA or Asia-Related (6 UOC)

CHIN (or INDO or KORE or JAPN) (6 UOC)

LAWS1082 Property and Equity 2 (6 UOC)

Note: Years 5 and 6 are the same for all five plans.

UOC Distribution	Number of Courses	UOC
Arts & Social Science		138
3 International Studies Core Sequence. (2 x Level 1 core courses, 1 x Level 4 core courses)	3 x 6 UOC	18
6 ASIA and Asia-related courses	6 x 6 UOC	36
6 courses from one approved language sequence. Chinese (CHIN) or Indonesian (INDO), or Japanese (JAPN) or Korean (KORE)	6 x 6 UOC	36
2 sessions approved Overseas Study Program	2 sessions	48
Law (same UOC Distribution for all four plans)		150
Core Courses (set sequence in Yrs 1 – 4, no selection required)	17	92
Law Research Project (LAWS2421)	1 x 2 UOC	2
7 Electives (Law electives are worth 8 uoc)	7 x 8 UOC	56
Total		288

Development Studies (program 4765, plan code COMDB14765)**Year 1****Session One**

FREN French or other approved language (6 UOC)

COMD1001 COMD core course – Level 1 (6 UOC)

INST INST core course – Level 1 (6 UOC)

LAWS1052 Foundations of Law (6 UOC)

Session Two

FREN French or other approved language (6 UOC)

COMD1002 COMD core course – Level 1 (6 UOC)

INST INST core course – Level 1 (6 UOC)

LAWS1061 Torts (6 UOC)

Year 2**Session One**

FREN French or other approved language (6 UOC)

INST INST core course - Level 2 (6 UOC)

LAWS1001 Criminal Law 1 (6 UOC)

LAWS1071 Contracts 1 (3 UOC)

LAWS2140 Public Law (3 UOC)

Session Two

FREN French or other approved language (6 UOC)

INST INST core course - Level 2 (6 UOC)

LAWS1011 Criminal Law 2 (6 UOC)

LAWS1072 Contracts 2 (6 UOC)

Year 3**Session One**

COMD2000 COMD core course – Level 2 (6 UOC)

COMD2050 COMD core course - Level 2 (6 UOC)

LAWS1081 Property, Equity and Trusts 1 (6 UOC)

LAWS6210 Law, Lawyers & Society (6 UOC)

Session Two

INST3101 Individual Overseas Study Program A (24 UOC)

Year 4**Session One**

INST3102 Individual Overseas Study Program B (24 UOC)

Session Two

COMD COMD core course – Level 4 (6 UOC)

ECON3110 COMD core course – Level 4 (6 UOC)

INST3900 INST compulsory course - Level 4 (6 UOC)

LAWS1082 Property and Equity 2 (6 UOC)

Note: Years 5 and 6 are the same for all four plans.

UOC Distribution	Number of Courses	UOC
Arts & Social Science		138
5 International Studies Core Sequence. (2 x Level 1 core courses, INST3900 at Level 4, plus 2 other courses)	5 x 6 UOC	30
6 COMD courses including COMD1001, COMD1002 Level 1, COMD2000, COMD2050 Level 2 and ECON3110 Level 4.	6 x 6 UOC	36
4 courses from one approved language sequence, CHIN, FREN, GERS, GREK, ITAL, INDO, JAPN, KORE, RUSS or SPAN	4 x 6 UOC	24
2 sessions approved Overseas Study Program	2 sessions	48
Law (same UOC Distribution for all four plans)		150
Core Courses (set sequence in Yrs 1 – 4, no selection required)	17	92
Law Research Project (LAWS2421)	1 x 2 UOC	2
7 Electives (Law electives are worth 8 uoc)	7 x 8 UOC	56
Total		288

European Studies (program 4765, plan code EUROA14765)**Year 1****Session One**

EURO1000 The New Europe A (6 UOC)

FREN French or other approved language (6 UOC)

INST INST core course – Level 1 (6 UOC)

LAWS1052 Foundations of Law (6 UOC)

Session Two

EURO1001 The New Europe B (6 UOC)

FREN French or other approved language (6 UOC)

INST INST core course – Level 1 (6 UOC)

LAWS1061 Torts (6 UOC)

Year 2**Session One**

EURO Approved EURO course (6 UOC)

FREN French or other approved language (6 UOC)

LAWS1001 Criminal Law 1 (6 UOC)

LAWS1071 Contracts 1 (3 UOC)

LAWS2140 Public Law (3 UOC)

Session Two

EURO Approved EURO course (6 UOC)

FREN French or other approved language (6 UOC)

LAWS1011 Criminal Law 2 (6 UOC)

LAWS1072 Contracts 2 (6 UOC)

Year 3**Session One**

EURO Approved EURO course (6 UOC)

FREN French or other approved language (6 UOC)

LAWS1081 Property, Equity and Trusts 1 (6 UOC)

LAWS6210 Law, Lawyers & Society (6 UOC)

Session Two

INST3101 Individual Overseas Study Program A (24 UOC)

Year 4**Session One**

INST3102 Individual Overseas Study Program B (24 UOC)

Session Two

EURO Approved EURO course (6 UOC)

FREN French or other approved language (6 UOC)

INST INST core course – Level 4 (6 UOC)

LAWS1082 Property and Equity 2 (6 UOC)

Note: Years 5 and 6 are the same for all five plans.**Global Studies** (program 4765, plan code GLSTA14765)**Year 1****Session One**

FREN French or other approved language (6 UOC)

GLST1100 GLST core course – Level 1 (6 UOC)

INST INST core course – Level 1 (6 UOC)

LAWS1052 Foundations of Law (6 UOC)

UOC Distribution	Number of Courses	UOC
Arts & Social Science		138
3 International Studies Core Sequence. 2 x Level 1, 1 x Level 4	3 x 6 UOC	18
6 EURO courses including EURO1000 and EURO1001	6 x 6 UOC	36
6 courses from one approved language sequence: FREN, GERS, ITAL, GREK, RUSS or SPAN	6 x 6 UOC	36
2 sessions approved Overseas Study Program	2 sessions	48
Law (same for all four plans)		150
Core Courses (set sequence in Yrs 1 – 4, no selection required)	17	92
Law Research Project (LAWS2421)	1 x 2 UOC	2
7 Electives (Law electives are worth 8 UOC)	7 x 8 UOC	56
Total		288

Session Two

FREN	French or other approved language	(6 UOC)
GLST	GLST – Level 1	(6 UOC)
INST	INST core course – Level 1	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

FREN	French or other approved language	(6 UOC)
INST	INST core course - Level 2	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

FREN	French or other approved language	(6 UOC)
INST	INST core course - Level 2	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3**Session One**

GLST	GLST course – Level 2 or 3	(6 UOC)
GLST	GLST course - Level 2 or 3	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS6210	Law, Lawyers & Society	(6 UOC)

Session Two

INST3101	Individual Overseas Study Program A	(24 UOC)

Year 4**Session One**

INST3102	Individual Overseas Study Program B	(24 UOC)

Session Two

GLST2104	GLST core course (Level 2)	(6 UOC)
GLST3000	GLST compulsory course – Level 4	(6 UOC)
INST3900	INST compulsory course - Level 4	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)

Note: Years 5 and 6 are the same for all five plans.

UOC Distribution	Number of Courses	UOC
Arts & Social Science		138
5 International Studies courses, 2 x Level 1, INST3900 at Level 4 plus 2 other courses	5 x 6 UOC	30
6 GLST courses including GLST1100 Level and GLST3000 Level 4	6 x 6 UOC	36
4 courses from one approved language sequence: CHIN, FREN, GERS, GREK, ITAL, INDO, JAPN, KORE, RUSS or SPAN	4 x 6 UOC	24
2 sessions approved Overseas Study Program	2 sessions	48
Law (same for all four plans)		150
Core Courses (set sequence in Yrs 1 – 4, no selection required)	17	92
Law Research Project (LAWS2421)	1 x 2 UOC	2
7 Electives (Law electives are worth 8 UOC)	7 x 8 UOC	56
Total		288

Language Studies (program 4765, plan code MODLA14765)**Year 1****Session One**

FREN	French or other approved language	(6 UOC)
INST	INST core course – Level 1	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)
SPAN	Spanish or other approved language	(6 UOC)

Session Two

FREN	French or other approved language	(6 UOC)
INST	INST core course – Level 1	(6 UOC)
LAWS1061	Torts	(6 UOC)
SPAN	Spanish or other approved language	(6 UOC)

Year 2**Session One**

FREN	French or other approved language	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
SPAN	Spanish or other approved language	(6 UOC)

Session Two

FREN	French or other approved language	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
SPAN	Spanish or other approved language	(6 UOC)

Year 3**Session One**

FREN	French or other approved language	(6 UOC)
SPAN	Spanish or other approved language	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS6210	Law, Lawyers & Society	(6 UOC)

Session Two

INST3101	Individual Overseas Study Program A	(24 UOC)

Year 4**Session One**

INST3102	Individual Overseas Study Program B	(24 UOC)

Session Two

FREN	French or other approved language	(6 UOC)
INST3900	INST compulsory course – Level 4	(6 UOC)
SPAN	Spanish or other approved language	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)

Note: Years 5 and 6 are the same for all five plans.

UOC Distribution	Number of Courses	UOC
Arts & Social Science		138
3 International Studies Core courses 2 x Level 1, 1 x Level 4	3 x 6 UOC	18
6 courses from an approved language sequence: CHIN, FREN, GERS, GREK, ITAL, INDO, JAPN, KORE, RUSS or SPAN	6 x 6 UOC	36
6 approved courses in a further language	6 x 6 UOC	36
2 session approved Overseas Study Program	2 sessions	48
Law (same for all four plans)		150
Core Courses (set sequence in Yrs 1 – 4, no selection required)	17	92
Law Research Project (LAWS2421)	1 x 2 UOC	2
7 Electives (Law electives are worth 8 UOC)	7 x 8 UOC	56
Total		288

General Education Requirements

Students enrolled in combined law degrees are not required to complete General Education courses.

Honours

The BlnSt component is available at Honours level. To qualify for the award of the degree at Honours level a student must have obtained 138 UOC in approved courses, satisfied the appropriate prerequisites for entry into the Honours level program, and have obtained a further 48 units of credit in an approved Honours program. The Honours degree is awarded in three classes (Class I, Class II in two Divisions, and Class III). Students who fail to obtain one of these classes may proceed to graduate with a Pass degree.

4785 Bachelor of Social Work Bachelor of Laws

BSW LLB

Typical Duration

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Description

This six year full-time program qualifies students for the professional practice of both social work and law.

Duration/Award

The program is a six year full-time combined program leading to the award of the two degrees of Bachelor of Social Work and Bachelor of Laws (BSW LLB).

Assumed Knowledge

There are no general assumed knowledge requirements for the Social Work program but students must study Social Work courses in a sequence approved by the Faculty of Arts and Social Sciences.

BSW

The degree of Bachelor of Social Work is not awarded until the completion of the full six year program, but students unable to complete the full program may apply for advanced standing in the Faculty of Arts and Social Sciences Social Work program.

Law or Non-Law Electives

Students may complete 6 units of credit in either law or non-law electives.

Approved Sequence of Study

Students must study social work courses in a sequence approved by the Faculty of Arts & Social Sciences and law courses in a sequence approved by the Faculty of Law. The approved standard sequence of study is detailed below under 'Program Structure'. Other sequences may be approved under special circumstances.

Pre-2001 Program

The following structure is for commencing students and for those who entered the program from 2001. There are different program requirements for students who entered the program prior to 2001.

Criminal Record Checks

It is a requirement that students who are undertaking placements in certain government departments and related organisations undergo a criminal record check.

Program Objectives and Learning Outcomes

Graduates will be equipped with the knowledge and skills to work in a variety of emerging areas which require an understanding of the law, social work theory and practice and a commitment to social justice. Such areas include consumer protection, tenancy obligations and entitlements, land rights, child custody and family property disputes, social security and welfare rights.

Program Structure

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
SOCW1001	Introduction to Social Work	(6 UOC)
Plus Psychology Elective		(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
SOCW1002	Communication and Social Work	(6 UOC)
Plus Sociology Elective		(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
SOCW2002	Society and Social Work 1	(6 UOC)
SOCW2005	Research for Social Work	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
SOCW1003	Human Behaviour 1	(6 UOC)
SOCW2006	Social Work Practice - Community Work	(6 UOC)
SOCW2100	Aboriginal People and Social Work	(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
SOCW2001	Human Behaviour 2	(6 UOC)
SOCW3002	Social Work Practice: Individuals, Families & Groups 2	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
SOCW2004	Society and Social Work 2	(6 UOC)
SOCW2003	Social Work Practice: Individuals, Families & Groups 1	(6 UOC)

Year 4

Session One

LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
SOCW3001	Social Work Practice - Third Year Practicum	(12 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
SOCW3004	Social Policy 1	(6 UOC)
SOCW3008	Selected Studies 1	(6 UOC)
Plus Law Elective		(4 UOC)

Year 5

Session One

SOCW4002	Social Work Practice in Organisations	(6 UOC)
SOCW4003	Selected Studies 2	(6 UOC)
SOCW4006	Social Policy 2	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

SOCW4010	Social Work Practice	(24 UOC)

Year 6

Session One

Law Electives	(24 UOC)

Session Two

Law Electives	(24 UOC)

Note: The first fieldwork practicum commences with a 5 week block (5 days per week) and continues on 3 days per week during session time. The final practicum is a 75 day block.

UOC Distribution	Number of Courses	UOC
Arts & Social Science		144
Social Work core program		132
Psychology elective	1 x 6 UOC	6
Sociology elective	1 x 6 UOC	6
Law		144
Core courses	17	92
Electives	6 x 8 UOC, 1 x 4 UOC	52
Total		288

Faculty of the Built Environment and Faculty of Law

4705 Bachelor of Architecture Bachelor of Laws

BArch LLB

Typical Duration

7 years

Minimum UOC for Award

336 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program provides an opportunity to obtain two professional degrees. It allows students to add the professionally recognised Law program to the professionally accredited Architecture program offered by the Faculty of the Built Environment.

In terms of career prospects, employers could include law firms specialising in construction law, related government departments and regulatory bodies and architectural practices.

Duration/Award

The program is a seven year full-time combined program leading to the award of the two degrees of Bachelor of Architecture and Bachelor of Laws (BArch LLB). Students may complete the program in 6.5 years or 13 sessions of study if they carry out Work Experience over the summer breaks. This would mean that the enrolment for one session would be 48 units of credit which includes the 24 units of credit for work experience.

Because the Architecture program contains a percentage of open electives which can be replaced by law courses, the combined program requires only three additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BArch program and both can be completed in thirteen sessions. It is considered to have a significant workload throughout these thirteen sessions.

Completion Requirements

From Year 2 both degrees must be studied concurrently with the expectation they students complete the full seven year program prior to graduating with the two degrees. It is not permissible for students enrolled in the combined Law degree program to graduate from the LLB degree until they have completed requirements for the non-Law degree.

Entry Requirements

The combined program is open to students who satisfy both the Architecture and Law entry conditions. Students may enter directly in Year 1 or may apply to transfer from the Architecture Program after the completion of one year if they have achieved a distinction or higher average. All applications for transfer must be registered with the University Admissions Centre. Transfer after the second year may result in the student taking more than the minimum time to complete the combined degree.

Organisation

The BArch LLB program is administered by the Faculty of Law. The Faculty requires the student to obtain approval of the Faculty of Built Environment, Architecture Program for the Architecture courses. The final program and timetable must be approved by the Head of the Architecture Program in the Faculty of the Built Environment.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the fields of both Architecture and Law.

Program Structure

Approved Sequence of Study:

Students must complete Year 1 (48 units of credit) of the Architecture program before attempting any courses from the Law program. In subsequent years students must study architecture courses in a sequence approved by the Faculty of the Built Environment and law courses in a sequence approved by the School of Law. An approved sequence is detailed below. Other sequences may be approved under special circumstances.

Year 1

Session One

BENV1101	Design Fundamentals: Studio 1	(8 UOC)
ARCH1121	Architectural History and Theory 1	(4 UOC)
BENV1141	Computers and Information Technology	(3 UOC)
ARCH1171	Architectural Technologies 1	(9 UOC)

Session Two

ARCH1102	Architectural Design Workshop 1	(8 UOC)
ARCH1142	Communications 1	(4 UOC)
ARCH1172	Architectural Technologies 2	(8 UOC)
ARCH1122	Architectural History & Theory 2	(4 UOC)

Year 2

Session One

ARCH1201	Architectural Design Workshop 2	(8 UOC)
ARCH1221	Architectural History and Theory 3	(4 UOC)
ARCH1271	Architectural Technologies 3	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ARCH1202	Architectural Design Workshop 3	(8 UOC)
ARCH1222	Architectural History and Theory 4	(3 UOC)
ARCH1272	Architectural Technologies 4	(4 UOC)
BENV1242	Computer-Aided Design	(3 UOC)
LAWS1061	Torts	(6 UOC)

Year 3

Session One

ARCH1301	Architectural Design Studio 1	(8 UOC)
ARCH1321	Architectural History and Theory 5	(3 UOC)
ARCH1371	Architectural Technologies 5	(4 UOC)
BENV1341	Design Modelling and Visualisation	(3 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

ARCH1302	Architectural Design Studio 2	(9 UOC)
ARCH1382	Practicum	(3 UOC)
LAWS1072	Contracts 2	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Year 4

Session One

ARCH1241	Communications 2	(3 UOC)
ARCH1401	Architectural Design Studio 3	(9 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)

Session Two

ARCH1381	Professional Practice 1	(3 UOC)
ARCH1402	Architectural Design Studio 4	(9 UOC)
ARCH1470	Building Services 1 & 2	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
ARCH1583	Work Experience	(24 UOC)

Note: Students are required to undertake 24 weeks of approved off-campus activity in the pursuit of architectural work experience after Year 1 and before entering Year 5. This may be carried out in a minimum of eight week components during summer breaks.

Year 5

Session One

ARCH1501	Investigation Workshop	(9 UOC)
ARCH1581	Politics, Community & Practice	(3 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)

Plus ONE of:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

ARCH1502	Graduation Project	(9 UOC)
ARCH1584	Professional Practice 2	(3 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)

Year 6

Session One

LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus Law Electives (12 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Plus Law Electives		(16 UOC)

Year 7**Session One**

Law Electives (24 UOC)

UOC Distribution	Number of Courses	UOC
Architecture		192
Core courses		168
Work Experience	24 weeks	24
Law		144
Core courses	17	92
Electives	6 x 8 UOC, 1 x 4 UOC	52
Total		336

Honours

Honours in Architecture: The degree of Bachelor of Architecture is awarded at either pass or Honours level. Honours is calculated on the basis of 192 units of credit from the Architecture Program and the 72 units of credit concurrently studied from the Law Program. These core law courses are considered in the same manner as Faculty electives for the purposes of the Honours calculation. The combined total units of credit is taken from student performance over 264 units of credit for the purpose of calculating Honours in Architecture.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

- The degrees Bachelor of Architecture and Bachelor of Laws are awarded at either Pass or Honours level (BArch only) after the successful completion of a minimum of 192 units of credit from the Architecture Program and 144 units of credit from the Laws Program.
- To fulfill these requirements, students must complete:
 - 168 units of core courses in Architecture, being all those prescribed in the faculty regulations for this program.
 - 24 units of work experience completed after Year 1 and before Year 5 as prescribed in the faculty regulations for this program.
 - 92 units of core courses in Law, being all those prescribed in the faculty regulations for this program.
 - 52 units of program electives in Law, selected in accordance with the faculty regulations for this program.
- The standard duration of the program is 7 years consisting of 13 semesters of full-time study (24 units of credit per semester) plus 1 semester of required work experience.
- Each student is required to undertake 24 weeks of approved off-campus activity in the pursuit of architectural work experience after Year 1 and before entering Year 5.
- Law units may not be taken until after the student has completed 48 units of credit of the BArch Program.

4707 Bachelor of Planning Bachelor of Laws**BPlan LLB****Typical Duration**

7 years

Minimum UOC for Award

336 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program provides an opportunity to obtain two professional degrees. It allows students to add the professionally recognised Law program to the professionally accredited Planning program offered by the Faculty of the Built Environment.

Duration/Award

The program is a seven year full-time combined program leading to the award of the two degrees of Bachelor of Planning and Bachelor of Laws (BPlan LLB).

Because the Planning program contains a percentage of open electives which can be replaced by Law courses, the combined program requires only four additional sessions of study to gain both qualifications. In general, this study is taken concurrently with the BPlan program and both can be completed in a minimum of seven years, consisting of twelve academic sessions (six years), plus two sessions of compulsory Work Experience. This compares with the five-year BPlan program, which consists of eight academic sessions and two sessions (12 months) of compulsory Work Experience.

Although Work Experience is normally undertaken after the completion of five academic sessions, BPlan LLB students may elect to undertake the one year (two sessions) of compulsory Work Experience required for the award of the single BPlan degree after the completion of their BPlan and LLB coursework.

In addition, students may undertake the compulsory Work Experience in flexible ways (subject to the approval of the Planning and Urban Development Program), thereby reducing the overall length of the BPlan LLB Program.

Completion Requirements

From Year 2, both degrees must be studied concurrently with the expectation they students complete the full seven year program prior to graduating with the two degrees. It is not permissible for students enrolled in the combined Law degree program to graduate from the LLB degree until they have completed requirements for the non-Law degree.

Entry Requirements

The combined program is open to students who satisfy both the Planning and Law entry conditions. Students may enter directly in Year 1 or may apply to transfer from the Planning program after the completion of one year. Entry on this basis is competitive and is based on a combination of UAI and tertiary results. Transfer after the second year may result in the student taking more than the minimum time to complete the combined degree.

Organisation

The BPlan LLB course is administered by the Faculty of Law. The Faculty requires the student to obtain approval of the Planning and Urban Development Program in the School of the Built Environment for the Planning components of their program. The final program and timetable must be approved by the Head of the Planning and Urban Development Program.

Approved Sequence of Study

Students must complete Year 1 (48 units of credit) of the Planning program before attempting any courses from the Law program. In subsequent years students must study Planning courses in the sequence approved by the Faculty of the Built Environment and Law courses in a sequence approved by the School of Law. The approved sequence of study is detailed below.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in the fields of both Law and Planning.

Program Structure**Year 1****Session One**

BENV1141	Computers and Information Technology	(3 UOC)
GEOS1701	Environmental Systems and Processes	(6 UOC)
PLAN1011	Urban Society	(6 UOC)
PLAN1101	Understanding Design	(6 UOC)
PLAN1241	Planning Theory and Practice	(6 UOC)

Session Two

GEOH2801	Geographical Information Systems for Built Environment	(6 UOC)
PLAN1042	Local Planning	(6 UOC)
PLAN1122	Development Processes	(6 UOC)
Plus Nominated FBE Elective		(6UOC)

Year 2**Session One**

LAWS1052	Foundations of Law	(6 UOC)
PLAN2032	Urban Design	(6 UOC)

PLAN2041	Integrated Planning 1	(6 UOC)
PLAN2111	Economics of Planning and Development	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
PLAN2122	History, Heritage and the Built Environment	(6 UOC)
PLAN2152	Resources, Planning and the Natural Environment	(6 UOC)

Year 3**Session One**

PLAN3031	Integrated Plan 2	(6 UOC)
PLAN3041	Planning Law & Administration	(6 UOC)
PLAN3051	Development Assessment	(6 UOC)

PLUS

LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

PLAN0081	Work Experience	(24 UOC)

Year 4**Session One**

PLAN0082	Work Experience	(24 UOC)

Session Two

LAWS1072	Contracts 2	(6 UOC)
PLAN3015	Social Planning	(6 UOC)
PLAN3032	Integrated Plan 3	(6 UOC)
PLAN3052	Qualitative Methods	(6 UOC)

Year 5**Session One**

GEOH3671	Transport, Land Use and Environment	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
PLAN4031	Research Design	(3 UOC)
PLAN4221	Regional Policy	(3 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
PLAN4132	Thesis Project	(12 UOC)
PLAN4142	Professionalism, Ethics and Politics	(6 UOC)

Year 6**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)

Plus ONE of the following courses

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law Electives		(4 UOC)

Year 7**Session One**

Law Electives		(24 UOC)

Session Two

Lw Electives		(24 UOC)

UOC Distribution	Number of Courses	UOC
Planning		192
Core courses		168
Work Experience	24 weeks	24
Law		144
Core courses	17	92
Electives	6 x 8 UOC, 1 x 4 UOC	52
Total		336

Note: Students are required to undertake 24 weeks of approved off-campus activity in the pursuit of architectural work experience after Year 1 and before entering Year 5. This may be carried out in a minimum of eight week components during summer breaks.

Honours

The degree of Bachelor of Planning is awarded at either at Pass or Honours level. The award of Honours is calculated on the basis of 144 of credit from the Planning program and 48 units of credit concurrently studied from the Law program. These law courses are considered in the same manner as Faculty of the Built Environment electives for the purposes of the Honours calculation. The combined total units of credit is taken from student performance over 192 units of credit for the purpose of calculating Honours in Planning.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

1. The degrees Bachelor of Planning and Bachelor of Laws are awarded at either Pass or Honours level (BPlan only) after the successful completion of a minimum of 192 units of credit from the Planning Program and 144 units of credit from the Laws Program.

2. To fulfill these requirements, students must complete:

- 144 units of core courses in Planning (including nominated elective), being all those prescribed in the faculty regulations for this program.
- 48 units of work experience as prescribed in the faculty regulations for this program.
- 92 units of core courses in Law, being all those prescribed in the faculty regulations for this program.
- 52 units of program electives in Law, selected in accordance with the faculty regulations for this program.

3. The standard duration of the program is 7 years consisting of 12 semesters of full-time study (24 units of credit per semester) plus 2 semester of required work experience.

4. The standard duration of the program is 7 years, consisting of 12 sessions of full-time study (24 units of credit per session) plus 2 sessions of required work experience.

5. Law units may not be taken until after the student has completed 48 units of credit of the BPlan Program.

Faculty of Commerce & Economics and Faculty of Law

4733 Bachelor of Commerce Bachelor of Laws

BCom LLB**Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Laws degree may be combined with a Bachelor of Commerce specialising in Accounting, Actuarial Studies, Business Economics, Business Statistics, Business Strategy and Economic Management, Economic History, Industrial Relations, Finance, Financial Economics, Human Resource Management, Information Systems, International Business, Marketing or Management.

This program provides an opportunity to obtain two degrees of professional importance to business, administration and commercial law practice.

Duration/Award

The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Commerce and Bachelor of Laws (BCom/LLB).

Distinction

The BCom degree may be awarded with Distinction where a student has achieved a weighted average mark (WAM) of at least 75% in the UNSW courses completed as part of that degree.

Transferring Majors (Plans)

Students must nominate a major (plan code) at enrolment. Subsequent transfers to another major may be possible subject to the approval of both faculties.

Graduation

Candidates enrolled in the combined degree programs may be awarded the degree of BCom after the completion of specified requirements. Full details are given in the 'Academic Rules'.

Commerce & Economics Courses

Apart from service courses for other faculties, and unless specified as from which discipline they must be chosen, commerce & economics options may be chosen from any course taught by the Faculty of Commerce and Economics according to the requirements for the selected Commerce major. (The usual course prerequisites, corequisites and exclusions apply). No course can be counted both as an option and as a prescribed course.

Approved Sequence of Study

Students must study commerce and economics courses in a sequence approved by the Faculty of Commerce and Economics and law courses in a sequence approved by the Faculty of Law. Approved sequences for each combined program are given below; other sequences may be approved under special circumstances.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the disciplines of both Commerce and Law.

Program Structure

Total units of credit requirements

Law compulsory courses	92 UOC
Law elective courses	64 UOC
Approved Commerce courses (including first year compulsory core courses)	84 UOC

The single major requirement for the BCom is 48 UOC.

PLANS (Majors)

Accounting (program 4733, plan code ACCTA14733)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2

Session One

Commerce & Economics Elective 1	(6 UOC)
ACCT2522 Management Accounting: Process Improvement & Innovation	(6 UOC)
LAWS1001 Criminal Law 1	(6 UOC)
LAWS1071 Contracts 1	(3 UOC)
LAWS2140 Public Law	(3 UOC)

Session Two

Commerce & Economics Elective 2	(6 UOC)
ACCT2542 Corporate Financial Reporting & Analysis	(6 UOC)
LAWS1011 Criminal Law 2	(6 UOC)
LAWS1072 Contracts 2	(6 UOC)

Year 3

Session One

Accounting Option 1	(6 UOC)
ACCT3563 Issues in Financial Reporting & Analysis	(6 UOC)
LAWS1081 Property, Equity and Trusts 1	(6 UOC)
LAWS2160 Administrative Law	(6 UOC)

Session Two

Accounting Option 2	(6 UOC)
ACCT3583 Stakeholder Value Management	(6 UOC)
LAWS1082 Property and Equity 2	(6 UOC)
LAWS6210 Law, Lawyers and Society	(6 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives	(2 x 8UOC)	(16 UOC)

Year 5

Law electives	(48 UOC)

Notes:

LEGT: Students enrolled in either the BCom LLB are not permitted to enrol in courses from the School of Business Law and Taxation (LEGT).

Commerce electives can be taken from any courses taught by the Faculty of Commerce and Economics (except LEGT) providing the requirements have been met. Details can be found in the Course Descriptions section of this Handbook.

Professional Recognition: Students wishing to obtain CPA/CA accreditation should choose INFS1602 and FINS1613 as their Commerce and Economics Electives. Please note INFS1602 is no longer mandatory for the CA accreditation.

Accounting Options

ACCT3585	E-Business: Strategy & Processes	S2
ACCT3601	Global Financial Reporting & Analysis	S2
ACCT3610	Financial Statement Analysis	S1
ACCT3708	Auditing & Assurance Services*	S1 or S2
FINS3626	International Corporate Governance	S1

* Please note that ACCT3708 is no longer mandatory for CPA accreditation but it is desirable to do so and it is required for CA accreditation.

Accounting is available at Honours level. Please refer to the 'Honours' section below.

Actuarial Studies (program 4733, plan code ACTLB14733)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

plus ONE of the following courses:

MATH1151	Mathematics for Actuarial Studies & Commerce	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

ACTL1001	Actuarial Studies and Commerce	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
LAWS1061	Torts	(6 UOC)

plus ONE of the following courses:

MATH1251	Mathematics for Actuarial Studies & Commerce	(6 UOC)
MATHS1241	Higher Mathematics 1B	(6 UOC)

Year 2

Session One

ACTL2001	Financial Mathematics	(6 UOC)
ACTL2002	Probability and Statistics for Actuaries	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

ACTL2003	Stochastic Models for Actuarial Applications	(6 UOC)
ACCT1511	Accounting & Financial Management 1B	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3

Session One

ACTL3003	Insurance Risk Models	(6 UOC)
ACTL3004	Financial Economics for Insurance and Superannuation	(6 UOC)

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Session Two

ACTL3003	Insurance Risk Models	(6 UOC)
ACTL3004	Financial Economics for Insurance and Superannuation	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
2 Law Electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit

Note: The combined Commerce/Law program in Actuarial Studies allows students to complete an actuarial major but does NOT enable them to complete all the courses equivalent to Part I and Part II subjects of the professional body "The Institute of Actuaries of Australia". The program allows students to complete 6 (out of a total of 8) Part I professional actuarial courses.

Actuarial Studies is available at Honours level. Please refer to the 'Honours' section below.

Business Economics (program 4733, plan code ECONF14733)**Year 1****Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
Economics Elective 1		(6 UOC)
Economics Elective 2		(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Economics Elective 3		(6 UOC)
Economics Elective 4		(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Economics Elective 3		(6 UOC)
Economics Elective 4		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Commerce/Economics Option 1		(6 UOC)
Commerce/Economics Option 2		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Note: Law students may not take any law courses offered by the School of Business Law & Taxation (LEGT)

PLEASE NOTE that six Economics electives are to be selected from the electives below, two electives must be from List B.

List A

ECON2101	Microeconomics 2	S1
ECON2102	Macroeconomics 2	S2
ECON2103	Business and Government	S2
ECON2104	Applied Macroeconomics	S1
ECON2105	Economics of Corporations	S2
ECON2107	The Economics of Information & Technology	S1
ECON2109	Economics of Natural Resources	S1
ECON2111	Globalisation	S2
ECON2112	Game Theory and Business Strategy	S1
ECON2113	Economics of E-Commerce	S2
ECON2116	Economics of Japanese Business & Government	S1
ECON2117	Economics of Tourism	S1
ECON2127	Environmental Economics	S2
ECON2206	Introductory Econometrics	S1
ECON2305	Modern Asian Economic History	S1
ECON2313	Australian Economic Development	S1
ECON2322	European Integration	S2

List B

ECON2207	Econometric Methods	S2
ECON3101	Markets and Public Choice	S1
ECON3104	International Macroeconomics	S1
ECON3106	Public Finance	S2
ECON3107	Economics of Finance	S1
ECON3109	Economic Growth, Technology & Structural Change	S1
ECON3110	Development Economics	S2
ECON3112	The Newly Industrialising Economies of East Asia	S2
ECON3113	Economic Development in ASEAN Countries	S1
ECON3114	Superannuation and Retirement Benefits	S2
ECON3116	International Economics	S2
ECON3120	Economic Reasoning	S2
ECON3121	Managerial Economics	S1
ECON3202	Mathematical Economics	S1
ECON3203	Econometric Theory	S2
ECON3204	Econometric Model Building	S2
ECON3206	Financial Econometrics	S2

Business Economics is available at Honours level. Please refer to the 'Honours' section below.

Business Statistics (program 4733, plan code ECONH14733)**Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
ECON2101	Microeconomics 2	(6 UOC)
ECON2206	Introductory Econometrics	(6 UOC)

Session Two

ECON2102	Macroeconomics 2	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)

LAWS1072 Contracts 2 (6 UOC)
Business Statistics Elective 1 (6 UOC)

Year 3

Session One

LAWS1081 Property, Equity and Trusts 1 (6 UOC)
LAWS2160 Administrative Law (6 UOC)
Business Statistics Elective 2 (6 UOC)
Business Statistics Elective 3 (6 UOC)

Session Two

LAWS1082 Property and Equity 2 (6 UOC)
LAWS6210 Law, Lawyers and Society (6 UOC)
Business Statistics Elective 4 (6 UOC)
Business Statistics Elective 5 (6 UOC)

Year 4

Session One

LAWS2150 Federal Constitutional Law (6 UOC)
LAWS2311 Litigation 1 (6 UOC)
LAWS4010 Business Associations 1 (6 UOC)

Plus ONE of the following courses:

LAWS8320 Legal Theory (6 UOC)
LAWS8820 Law and Social Theory (6 UOC)

Session Two

LAWS2321 Litigation 2 (6 UOC)
LAWS7420 Advanced Legal Research (2 UOC)
Law electives (16 UOC)

Year 5

Law electives totalling 48 units of credit.

Business Statistics Electives

ECON2207 Econometric Methods S2
ECON2208 Operation Research S2
ECON2209 Business Forecasting S2
ECON2215 Statistics for Econometrics S1
ECON3202 Mathematical Economics S1
ECON3203 Economics Theory S2
ECON3206 Financial Econometrics S2

Business Statistics is available at Honours level. Please refer to the 'Honours' section below.

Business Strategy & Economic Management (program 4733, plan code ECON14733)

Year 1

Session One

ACCT1501 Accounting and Financial Management 1A (6 UOC)
ECON1101 Microeconomics 1 (6 UOC)
ECON1202 Quantitative Methods A (6 UOC)
LAWS1052 Foundations of Law (6 UOC)

Session Two

ACCT1511 Accounting and Financial Management 1B (6 UOC)
ECON1102 Macroeconomics 1 (6 UOC)
ECON1203 Quantitative Methods B (6 UOC)
LAWS1061 Torts (6 UOC)

Year 2

Session One

ECON2101 Microeconomics 2 (6 UOC)
ECON2112 Game Theory and Business Strategy (6 UOC)
LAWS1001 Criminal Law 1 (6 UOC)
LAWS1071 Contracts 1 (3 UOC)
LAWS2140 Public Law (3 UOC)

Session Two

ECON2105 Economics of Corporations (6 UOC)
Business Strategy & Economic Management elective 1 (6 UOC)
LAWS1011 Criminal Law 2 (6 UOC)
LAWS1072 Contracts 2 (6 UOC)

Year 3

Session One

ECON3121 Managerial Economics (6 UOC)
Business Strategy & Economic Management elective 2 (6 UOC)
LAWS1081 Property, Equity and Trusts 1 (6 UOC)
LAWS2160 Administrative Law (6 UOC)

Session Two

Business Strategy & Economic Management elective 3 (6 UOC)
Business Strategy & Economic Management elective 4 (6 UOC)
LAWS1082 Property and Equity 2 (6 UOC)
LAWS6210 Law, Lawyers and Society (6 UOC)

Year 4

Session One

LAWS2150 Federal Constitutional Law (6 UOC)
LAWS2311 Litigation 1 (6 UOC)
LAWS4010 Business Associations 1 (6 UOC)

Plus ONE of the following courses:

LAWS8320 Legal Theory (6 UOC)
LAWS8820 Law and Social Theory (6 UOC)

Session Two

LAWS2321 Litigation 2 (6 UOC)
LAWS7420 Advanced Legal Research (2 UOC)
Law electives (16 UOC)

Year 5

Law electives totalling 48 units of credit.

Business Strategy & Economic Management Electives

ACCT2522 Management Accounting S1
ECON2102 Macroeconomics 2 S2
ECON2103 Business and Government S2
ECON2104 Applied Microeconomics S1
ECON2107 Economics of Info. & Tech. S1
ECON2113 Economics of E-Commerce S2
ECON2116 Economics of Japanese Business S1
ECON2206 Introductory Econometrics S1
ECON2207 Econometric Methods S2
ECON2208 Operations Research S2
ECON2209 Business Forecasting S1
ECON3101 Markets & Public Choice S1
ECON3106 Public Finance S2

Business Strategy & Economic Management is available at Honours level. Please refer to the 'Honours' section below.

Economic History (program 4733, plan code ECOHB14733)

Year 1

Session One

ACCT1501 Accounting and Financial Management 1A (6 UOC)
ECON1101 Microeconomics 1 (6 UOC)
ECON1202 Quantitative Methods A (6 UOC)
LAWS1052 Foundations of Law (6 UOC)

Session Two

ACCT1511 Accounting and Financial Management 1B (6 UOC)
ECON1102 Macroeconomics 1 (6 UOC)
ECON1203 Quantitative Methods B (6 UOC)
LAWS1061 Torts (6 UOC)

Year 2

Session One

ECON2101 Microeconomics 2 (6 UOC)
ECON2206 Introductory Economics (6 UOC)
LAWS1001 Criminal Law 1 (6 UOC)
LAWS1071 Contracts 1 (3 UOC)
LAWS2140 Public Law (3 UOC)

Session Two

ECON2102 Macroeconomics 2 (6 UOC)
LAWS1011 Criminal Law 2 (6 UOC)
LAWS1072 Contracts 2 (6 UOC)
Economic History Elective 1 (6 UOC)

Year 3

Session One

LAWS1081 Property, Equity and Trusts 1 (6 UOC)
LAWS2160 Administrative Law (6 UOC)
Economic History Elective 2 (6 UOC)
Economic History Elective 3 (6 UOC)

Session Two

LAWS1082 Property and Equity 2 (6 UOC)
LAWS6210 Law, Lawyers and Society (6 UOC)
Economic History Elective 4 (6 UOC)
Economic History Elective 5 (6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Economic History Electives

ECON1301	Australia in the Global Economy	S2
ECON1302	Australia and the Asia Pacific Economies	S2
ECON2305	Modern Asian Economic History	S1
ECON2313	Australian Economic Development	S1
ECON2322	European Integration	S2

Financial Economics (program 4733, plan code ECONJ14733)**Year 1****Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

ECON2101	Microeconomics 2	(6 UOC)
ECON2206	Introductory Econometrics	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

ECON3206	Financial Econometrics	(6 UOC)
Financial Economics elective 1		(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3**Session One**

ECON2209	Business Forecasting	(6 UOC)
ECON3107	Economics of Finance	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
FINS1612	Capital Markets and Institutions	(6 UOC)
Financial Economics elective 2		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Financial Economics Electives:

ECON2102	Macroeconomics 2	S2
ECON2104	Applied Microeconomics	S1
ECON2112	Game Theory & Business Strategy	S1
ECON2207	Econometric Methods	S2
ECON2208	Operations Research	S2
ECON2215	Statistics for Econometrics	S1
ECON3101	Markets and Public Choice	S1
ECON3104	International Macroeconomics	S1
ECON3202	Mathematical Economics	S1
ECON3203	Econometric Theory	S2
ECON3204	Econometric Model Building	S2
FINS1613	Business Finance	S2
FINS2622	Emerging Capital Markets	S2

Financial Economics is available at Honours level. Please refer to the 'Honours' section below.

Finance (program 4733, plan code FINSA14733)**Year 1****Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

FINS1612	Capital Markets and Institutions	(6 UOC)
FINS1613	Business Finance	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

FINS2624	Portfolio Management	(6 UOC)
FINS3616	International Business Finance	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Finance Elective 1		(6 UOC)
Finance Elective 2		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Finance Elective 3		(6 UOC)
Finance Elective 4		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Finance Electives

FINS2622	Emerging Capital Markets	(6 UOC)
FINS2643	Wealth Management	(6 UOC)

FINS3623	Venture Capital	(6 UOC)
FINS3625	Applied Corporate Finance	(6 UOC)
FINS3626	International Corporate Governance	(6 UOC)
FINS3630	Bank Financial Management	(6 UOC)
FINS3631	Risk and Insurance	(6 UOC)
FINS3633	Real Estate Finance	(6 UOC)
FINS3634	Credit Analysis and Lending	(6 UOC)
FINS3635	Options, Futures and Risk Management	(6 UOC)
FINS3636	Interest Rate Risk Management	(6 UOC)
FINS3637	Wealth Management Advice	(6 UOC)
FINS3640	Investment Management Modeling	(6 UOC)
FINS3641	Security Analysis & Valuation	(6 UOC)
FINS3642	Strategies for Investment Management	(6 UOC)
FINS3650	International Banking	(6 UOC)
FINS3651	International Financial Services	(6 UOC)
FINS3775	Research Methods in Finance 1	(6 UOC)

Finance is available at Honours level. Please refer to the 'Honours' section below.

Human Resources Management (program 4733, plan code IROBC14733)

A total of 42 units of credit obtained in Required (18 UOC) and Optional Courses (minimum 18 UOC).

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
MGMT1701	Industrial Relations	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2

Session One

MGMT1712	Management of Organisations	(6 UOC)
MGMT2718	Human Resource Management	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

ECON1203	Quantitative Methods B	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Human Resource Management Elective (List A)		(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Human Resource Management Elective (List A or B)		(6 UOC)
Human Resource Management Elective (List B)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Human Resource Management Elective (List A or B)		(6 UOC)
Human Resource Management Elective (List A)		(6 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Human Resource Management Electives

Option List A (minimum 12 UOC)

MGMT3702	International Human Resource Management Practice	(6 UOC)
MGMT3724	Strategic Human Resource Management	(6 UOC)
MGMT3728	Managing Pay and Performance	(6 UOC)
MGMT3729	Managing Workplace Training	(6 UOC)

Option List B (minimum 6 UOC)

MGMT2702	Industrial Law*	(6 UOC)
MGMT2704	Social Organisation of Work	(6 UOC)
MGMT2715	Labour History*	(6 UOC)
MGMT2724	Health and Safety at Work	(6 UOC)
MGMT3705	Management and Employment Relations	(6 UOC)
MGMT3708	Research Methods in Employment and Management	(6 UOC)
MGMT3721	Negotiation Skills	(6 UOC)

Human Resource Management is available at Honours level. Please refer to the 'Honours' section below.

**Subject to availability. Please consult the school timetable.*

Industrial Relations (program 4733, plan code IROBA14733)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
LAWS1061	Torts	(6 UOC)
MGMT1701	Industrial Relations	(6 UOC)

Year 2

Session One

ECON1203	Quantitative Methods B	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
MGMT2702	Industrial Law	(6 UOC)

Session Two

MGMT1702	Labour Organisations	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Industrial Relations Elective (List A)		(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Industrial Relations Elective (List A or B)		(6 UOC)
Industrial Relations Elective (List B)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Industrial Relations Elective (List A or B)		(6 UOC)
Industrial Relations Elective (List A)		(6 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Industrial Relations Electives**List A**

MGMT2704	Social Organisation of Work
MGMT2715	Labour History*
MGMT3705	Management & Employment Relations

*Subject to availability. Please consult the school timetable.

List B

MGMT1712	Management of Organisations
MGMT2703	International Employment Relations
MGMT2718	Human Resource Management
MGMT2724	Health & Safety at Work
MGMT3702	International Human Resource Management
MGMT3721	Negotiation Skills
MGMT3724	Strategic Human Resource Mgmt
MGMT3728	Managing Pay & Performance
MGMT3729	Managing Workplace Training

Industrial Relations is available at Honours level. Please refer to the 'Honours' section below.

Information Systems (program 4733, plan code INFSA14733)**Year 1****Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
INFS1602	Computer Information Systems	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

ECON1102	Macroeconomics	(6 UOC)
INFS1603	Business Data Management	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

INFS2603	Systems Analysis and Design	(6 UOC)
INFS2607	Business Data Networks	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Information Systems Elective 1		(6 UOC)
Information Systems Elective 2		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Information Systems Elective 3		(6 UOC)
Information Systems Elective 4		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Information Systems Electives

INFS2609	Software Implementation	(6 UOC)
INFS2611	Requirements Elicitation	(3 UOC)
INFS3603	Business Intelligence Systems	(6 UOC)
INFS3604	Information Technology Management	(6 UOC)
INFS3605	Implementation Workshop	(6 UOC)
INFS3606	Telecommunications for Electronics Commerce	(6 UOC)
INFS3608	Advanced Database Systems	(6 UOC)
INFS3611	Design Workshop	(6 UOC)
INFS3621	Alternative System Design Methodologies	(3 UOC)
INFS3622	Distributed Application Design	(3 UOC)
INFS3623	Multimedia Systems Design	(3 UOC)
INFS3685	Electronic Commerce Management	(6 UOC)

Students who wish to undertake an Honours year in Information Systems must consult the Head of School at the end of Year 2.

International Business (program 4733, plan code IBUSA14733)**Year 1****Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

MGMT1101	Global Business Environment	(6 UOC)
MGMT2101	International Business & Multinational Enterprises	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

MGMT1102	Managing Across Cultures	(6 UOC)
MGMT3101	International Business Strategy	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
International Business Elective (List A)		(6 UOC)
International Business Elective (List A or B)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
MGMT3102	Asia Pacific Business	(6 UOC)
International Business Elective (List B)		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

International Business Electives**List A**

MGMT2106	Comparative Management Systems in East Asia
MGMT3103	Global Stakeholder Management*

**Subject to availability. Please consult the school timetable.*

List B

MGMT1001	Fundamentals of Management
MGMT2105	Chinese Business Enterprise
ECON2105	Economics of the Corporation
ECON2111	Globalisation
ECON2322	European Integration
FINS1612	Capital Markets & Institutions

Note: Languages offered by the School of Modern Language Studies may be taken as International Business options. Please consult with the School of International Business about your language options.

Please note that law students may not take law courses offered by the School of Business Law and Taxation (LEGT).

International Business is available at Honours level. Please refer to the 'Honours' section below.

Management (program 4733, plan code MGMTA14733)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
MGMT1001	Fundamentals of Management	(6 UOC)
Management Elective 1 (List A)		(6 UOC)

Session Two

MGMT1002	Managing Organisational Behaviour	(6 UOC)
MGMT2002	International Business Communication	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
MGMT2001	Managing Innovation & Organisational Change	(6 UOC)
Management Elective 1 (List B)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
MGMT3001	Managing Business Strategy*	(6 UOC)
Management Elective (List A or B)		(6 UOC)

**Subject to availability. Please consult the school timetable.*

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

List A

ACCT2522	Management Accounting Process Improvement & innovation
ECON2112	Game Theory & Business Strategy

MGMT1102	Managing Across Cultures
MARK1012	Marketing Fundamentals

List B

ACCT3585	E-Business: Strategy & Processes
ECON2105	Economics of the Corporation
FINS1612	Capital Markets and Institutions
FINS1613	Business Finance

Management is available at Honours level. Please refer to the 'Honours' section below.

Marketing (program 4733, plan code MARKA14733)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)
MARK1012	Marketing Fundamentals	(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
MARK2051	Consumer Behaviour	(6 UOC)
MARK2052	Marketing Research	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
MARK2053	Marketing Communications & Promotions Management	(6 UOC)
MARK2054	Market Analysis	(6 UOC)

Year 3

Session One

ECON1102	Macroeconomics 1	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
MARK3081	Distribution Strategy & Retail Channels	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
MARK3082	Strategic Marketing Management	(6 UOC)
Marketing Elective		(6 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Marketing Electives

MARK1014	Customer Relationship Management
MARK2055	Services Marketing Management
MARK3071	International & Global Marketing
MARK3072	Advanced Consumer Behaviour
MARK3091	New Product & New Service Development
MARK3092	Brand Management

Marketing is available at Honours level. Please refer to the 'Honours' section below.

General Education Requirements

Students enrolled in combined law degrees are not required to complete General Education courses. However, if a student wishes to graduate with their BCom degree after 3 years, they are required to complete 12 UOC of General Education from faculties other than Law and Commerce as well as the required Law and Commerce courses for years 1-3.

Honours

The BCom degree is available with Honours. This normally requires an extra year of study between Years 3 and 4. Students interested in undertaking Honours should consult with the relevant School Office at the end of Year 1.

Notwithstanding the above regulations, students undertaking the combined Bachelor of Commerce at Honours level may be awarded the degree of Bachelor of Commerce at Honours level once they have completed the Honours year and the requirements of the first three years of the combined Bachelor of Commerce at Honours Level.

Candidates for Honours in the Commerce degree course must complete one year additional to the minimum of five years required for the Commerce/Law program at Pass level.

The requirements relating to Honours in the BCom degree courses are noted at the end of the program for each specialisation. Students ordinarily will interpolate an Honours year between Years 3 and 4 of the combined course.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to entry for program 4790 Bachelor of Laws.

Rules Relating To the Bachelor of Commerce/Bachelor of Laws Program and the Bachelor of Economics/Bachelor of Law Program

The rules as set out in other sections of this Handbook, shall apply wherever relevant to candidates for the program of Bachelor of Commerce Bachelor of Laws and Bachelor of Economics Bachelor of Laws.

BCom and BEc: Candidates for the combined Commerce/Law or Economics/Law degree program may be awarded the degree of BCom or BEc either when they have successfully completed the entire combined program or, for students enrolling from 1996, when they have completed the requirements for the award of the first three years of the combined Bachelor of Commerce or Bachelor of Economics/Bachelor of Laws program – as set out in the program outline – and subject to satisfaction of General Education requirements for the single pass degree.

Concessions apply in deciding when students enrolled prior to 1995 who have not completed the requirements of the combined degree have nevertheless completed the requirements of the BCom or BEc. Please consult earlier faculty handbooks for the appropriate 'Rules relating to the award of the degree of Bachelor of Commerce or Bachelor of Economics prior to the completion of the Combined Degree'.

Honours: Notwithstanding the above regulations, students undertaking the combined Bachelor of Commerce or Bachelor of Economics at Honours level/Bachelor of Laws program may be awarded the degree of Bachelor of Commerce or Bachelor of Economics at Honours level once they have completed the Honours year and the requirements of the first three years of the combined Bachelor of Commerce or Bachelor of Economics at Honours Level/Bachelor of Laws program.

Candidates for Honours in the Commerce or Economics degree course must complete one year additional to the minimum of five years required for the Commerce/Law program at Pass level.

The requirements relating to Honours in the BCom and BEc degree courses are noted at the end of the program for each specialisation. Students ordinarily will interpolate an Honours year between Years 3 and 4 of the combined course.

Commerce and Economics Options: Options may be chosen from any offered by the Faculty of Commerce and Economics except for (i) LEGT courses, (ii) service courses for other faculties. Prerequisites apply. No course can be counted both as an option and as a prescribed course.

4744 Bachelor of Economics Bachelor of Laws

BEc LLB

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Laws degree may be combined with a Bachelor of Economics specialising in Economics, Econometrics or Financial Economics.

Program Objectives and Learning Outcomes

This program provides an opportunity to obtain two degrees of professional importance to business, administration and commercial law practice. At the completion of this program students will have obtained a sound knowledge base in the disciplines of both Economics and Law.

Program Structure

Duration/Award:

The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Economics and Bachelor of Laws (BEc LLB).

Distinction:

The BEc degree may be awarded with Distinction where a student has achieved a weighted average mark (WAM) of at least 75% in the UNSW courses completed as part of that degree.

Transferring Majors (Plans):

Students must nominate a major (plan code) at enrolment. Subsequent transfers to another major may be possible subject to the approval of both Faculties.

Graduation:

Candidates enrolled in the combined degree program BEc/LLB may be awarded the degree of BEc after the completion of specified requirements. Full details are given in the 'Rules Relating to the Award of Degrees'.

Commerce & Economics courses:

Apart from service courses for other faculties, and unless specified as from which discipline they must be chosen, Commerce and Economics options may be chosen from any taught by the Faculty of Commerce and Economics except for those offered by the School of Business Law and Taxation (LEGT). No course can be counted both as an option and as a prescribed course.

Approved Sequence of Study:

Students must study commerce and economics courses in a sequence approved by the School of Economics and law courses in a sequence approved by the School of Law. Specifically, all or the majority of law core courses must be completed prior to enrolling in law electives. Approved sequences for each combined program are given below; other sequences may be approved under special circumstances.

Total Unit Requirements

Law compulsory courses - 92UOC

Law elective courses - 64UOC

Approved economic courses - 84UOC including the first year compulsory core courses

The single major requirement for the BEc is 60 UOC. Students enrolling in the BEc/LLB complete 60 UOC towards a major and 24 UOC of other approved Commerce & Economics courses including the compulsory first year core courses.

PLANS (Majors)

The following specialisations (majors) are available within the Bachelor of Laws Bachelor of Economics degree: Economics Econometrics Financial Economics.

For details of the recommended sequence of courses in each Economics major, please refer to the following plans.

Economics (program 4744, plan code ECONA14744)

Year 1

Session One

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)

ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
ECON2101	Microeconomics 2	(6 UOC)
ECON2206	Introductory Econometrics	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
ECON2102	Macroeconomics 2	(6 UOC)
ECON2207	Econometric Methods	(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Economics Elective (List A)		(6 UOC)
Economics Elective (List B)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Economics Elective (List B)		(6 UOC)
Economics Elective (List B)		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Plus Law Electives		(16 UOC)

Year 5**Session One**

Law Electives		(24 UOC)

Session Two

Law Electives		(24 UOC)

List A

ECON2103	Business and Government
ECON2104	Applied Macroeconomics
ECON2105	Economics of Corporations
ECON2107	The Economics of Information and Technology
ECON2109	Economics of Natural Resources
ECON2111	Globalisation
ECON2112	Game Theory and Business Strategy
ECON2113	Economics of e-Commerce
ECON2116	Economics of Japanese Business & Government
ECON2117	Economics of Tourism
ECON2127	Environmental Economics
ECON2305	Modern Asian Economic History
ECON2313	Australian Economic Development
ECON2322	European Integration
ECON3106	Public Finance
ECON3112	The Newly Industrialising Economies of East Asia
ECON3113	Economic Development in ASEAN Countries
ECON3119	Political Economy

List B

ECON3101	Markets and Public Choice
ECON3104	International Macroeconomics
ECON3107	Economics of Finance
ECON3109	Economic Growth, Technology & Structural Change
ECON3110	Development Economics
ECON3114	Superannuation and Retirement Benefits
ECON3116	International Economics
ECON3120	Economic Reasoning

ECON3121	Managerial Economics
ECON3202	Mathematical Economics
ECON3204	Econometric Model Building
ECON3203	Econometric Theory
ECON3206	Financial Econometrics

Econometrics (program 4744, plan code ECONC14744)

Year 1**Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)
ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
ECON2101	Microeconomics 2	(6 UOC)
ECON2206	Introductory Econometrics	(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
ECON2102	Macroeconomics 2	(6 UOC)
ECON2207	Econometric Methods	(6 UOC)

Year 3**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
ECON2215	Statistics for Econometrics	(6 UOC)
Econometric Elective (see below)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
ECON3203	Econometric Theory	(6 UOC)
Econometric Elective (See below)		(6 UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Plus Law Electives		(16 UOC)

Year 5**Session One**

Law Electives		(24 UOC)

Session Two

Law Electives		(24 UOC)

Econometric Electives (select 2 from the list below)

ECON2208	Operations Research	(6 UOC)
ECON2209	Business Forecasting	(6 UOC)
ECON3202	Mathematical Economics	(6 UOC)
ECON3204	Econometric Model Building	(6 UOC)
ECON3206	Financial Econometrics	(6 UOC)

Financial Economics (program 4744, plan code ECONJ14744)

Year 1**Session One**

ACCT1501	Accounting and Financial Management 1A	(6 UOC)
ECON1101	Microeconomics 1	(6 UOC)

ECON1202	Quantitative Methods A	(6 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Session Two

ACCT1511	Accounting and Financial Management 1B	(6 UOC)
ECON1102	Macroeconomics 1	(6 UOC)
ECON1203	Quantitative Methods B	(6 UOC)
LAWS1061	Torts	(6 UOC)

Year 2**Session One**

ECON2101	Microeconomics 2	(6 UOC)
ECON2206	Introductory Econometrics	(6 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

ECON3206	Financial Econometrics	(6 UOC)
LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Financial Economics Elective 1		(6UOC)

Year 3**Session One**

ECON2209	Business Forecasting	(6 UOC)
ECON3107	Economics of Finance	(6 UOC)
LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
FINS1612	Capital Markets and Institutions	(6 UOC)
Financial Economics Elective 2		(6UOC)

Year 4**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law electives		(16 UOC)

Year 5

Law electives totalling 48 units of credit.

Financial Economics Electives:

ECON2102	Macroeconomics 2	S2
ECON2104	Applied Microeconomics	S1
ECON2112	Game Theory & Business Strategy	S1
ECON2207	Econometric Methods	S2
ECON2208	Operations Research	S2
ECON2215	Statistics for Econometrics	S1
ECON3101	Markets and Public Choice	S1
ECON3104	International Macroeconomics	S1
ECON3202	Mathematical Economics	S1
ECON3203	Econometric Theory	S2
ECON3204	Econometric Model Building	S2
FINS1613	Business Finance	S2
FINS2622	Emerging Capital Markets	S2

Honours

Students undertaking the combined Bachelor of Economics at Honours level/Bachelor of Laws program may be awarded the degree of Bachelor of Economics at Honours level once they have completed the Honours year and the requirements of the first three years of the combined Bachelor of Economics at Honours Level/Bachelor of Laws program.

Candidates for Honours in the Economics degree course must complete one year additional to the minimum of five years required for the Economics/Law program at Pass level.

The requirements relating to Honours in the BEc degree courses are noted at the end of the program for each specialisation. Students ordinarily will

interpolate an Honours year between Years 3 and 4 of the combined course

Students interested in undertaking Honours should consult with the relevant School Office at the end of Year 1.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the entry for program 4790 Bachelor of Laws.

For Academic Rules relating to the Bachelor of Economics Bachelor of Laws, please refer to the entry for program 4733 Bachelor of Commerce Bachelor of Laws.

Faculty of Engineering and Faculty of Law**4775 Bachelor of Engineering in Civil Engineering Bachelor of Laws****BE LLB****Typical Duration**

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program will provide students with professional qualifications in areas of great importance to the community. The program will prove attractive to students who have in mind a career involving constructive developments. Most large construction projects raise a formidable range of legal issues, and there appears to be a need for highly qualified personnel who are able to understand both the engineering and the legal dimensions of such projects, both in Australia and overseas.

Duration/Award

The program is a six year full-time combined program leading to the award of the two degrees of Bachelor of Engineering and Bachelor of Laws (BE LLB). There will be a testamur for each degree in the combined program with both degrees being conferred at the completion of the full six-year program.

Assumed Knowledge

A prescribed standard in mathematics for entry to the Faculty of Engineering and to individual courses in that faculty. Further details are available in the UAC Guide.

Bachelor of Engineering

Students who decide not to continue in the LLB may complete the BE but must contact the Head of School of Civil and Environmental Engineering for any credit towards advanced standing in the BE of completed law courses.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the fields of both Civil Engineering and Law.

Program Structure**Approved Sequence of Study:**

Students must study engineering courses in a sequence approved by the Faculty of Engineering and law courses in a sequence approved by the Faculty of Law. Other sequences may be approved under special circumstances.

Year 1**Session One**

CVEN1021	Civil Engineering Practice 1A	(4 UOC)
CVEN1023	Statistics	(4 UOC)
CVEN1025	Computing	(4 UOC)
LAWS1052	Foundations of Law	(6 UOC)

Plus ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

CVEN1024	Dynamics	(4 UOC)
CVEN1026	Engineering Materials 1	(4 UOC)

LAWS1061	Torts	(6 UOC)
PHYS1279	Physics 1 (Civil Engineering)	(4 UOC)

Plus ONE of:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2

Session One

CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2126	Engineering Construction 1	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Plus ONE of:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

Session Two

CVEN2125	Systems Engineering	(3 UOC)
CVEN2322	Structural Engineering 1	(6 UOC)
CVEN2525	Introduction to Water Engineering	(3 UOC)
LAWS1072	Contracts 2	(6 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)

Year 3

Session One

CVEN2026	Engineering Materials 2	(3 UOC)
CVEN3023	Civil Engineering Practice 3A	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3322	Structural Engineering 2	(6 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
LAWS1001	Criminal Law 1	(6 UOC)

Session Two

CVEN3024	Civil Engineering Practice 3B	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3324	Structural Engineering 3	(3 UOC)
CVEN3448	Transport Engineering	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
LAWS1011	Criminal Law 2	(6 UOC)

Year 4

Session One

CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3438	Transport Planning and Environment	(3 UOC)
CVEN4126	Engineering Management 2	(3 UOC)
CVEN4225	Geotechnical Engineering 4	(3 UOC)
CVEN4323	Structural Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)

Plus ONE of the following courses:

CVEN4000	Honours Thesis Part A	(6 UOC)
CVEN4027	Civil Engineering Practice 4A	(6 UOC)
CVEN4028	Civil Engineering Practice 4B	(6 UOC)
CVEN4029	Civil Engineering Practice 4C	(6 UOC)

Session Two

LAWS2160	Administrative Law	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Civil Engineering Electives		(12 UOC)

Year 5

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law Elective		(4 UOC)

Year 6

Session One

Law Electives	(24 UOC)

Session Two

Law Electives	(24 UOC)

Total Units of Credit Requirements

Law courses	144 UOC
Engineering courses	144 UOC

Notes:

All students NOT undertaking an Honours thesis are required to select at least one major or 12 units of credit of Engineering electives. Students undertaking the Honours thesis are required to undertake at least 8 units of credit of Engineering electives. Students must complete a thesis to be considered for Honours in Engineering.

Honours

The degree of Bachelor of Engineering may be conferred as a Pass degree or as an Honours degree. There are two classes of Honours, Class I, and Class II in two divisions. The award and grade of Honours are made in recognition of superior performance throughout the program with greater weighting on courses in the later years.

Students must complete a Civil Engineering thesis to be considered for Honours in Engineering.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

4777 Bachelor of Engineering in Environmental Engineering Bachelor of Laws

BE LLB

Typical Duration

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program will provide students with professional qualifications in areas of great importance to the community. The program will prove attractive to students who have in mind a career involving environmental issues or engineering.

Employment could be with a law firm specialising in environmental law or a regulatory body such as the Environmental Protection Authority.

Assumed Knowledge

A prescribed standard in mathematics for entry to the Faculty of Engineering and to individual courses in that faculty. Further details are available in the UAC Guide.

Bachelor of Engineering

Students who decide not to continue in the LLB may complete the BE but must contact the Head of School of Civil and Environmental Engineering for any credit towards advanced standing in the BE of completed law courses.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the fields of both Environmental Engineering and Law.

Program Structure

Approved Sequence of Study:

Students must study engineering courses in a sequence approved by the Faculty of Engineering and law courses in a sequence approved by the Faculty of Law. An approved sequence appears below.

Year 1**Session One**

LAWS1052	Foundations of Law	(6 UOC)
CVEN1023	Statistics	(4UOC)
CVEN1025	Computing	(4UOC)
CVEN1721	Environmental Engineering Practice 1A	(4UOC)

Plus one of the following

CHEM1011	Fundamentals of Chemistry A or	
CHEM1031	Higher Chemistry C	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
CVEN1024	Dynamics	(4UOC)
CVEN1026	Engineering Materials 1	(4UOC)
CVEN1531	Introduction to Water and Atmospheric Chemistry	(4UOC)

Plus one of the following courses:

MATH1131	Mathematics 1A or	
MATH1141	Higher Mathematics 1A	(6 UOC)

Year 2**Session One**

CEIC0010	Mass Transfer and Material Balance	(3 UOC)
CVEN2023	Mechanics of Solids	(3 UOC)
CVEN2025	Engineering Computations 1	(3 UOC)
CVEN2222	Geotechnical Engineering 1	(3 UOC)
GMAT0753	Introduction to Spatial Information Systems	(3 UOC)
INDC4120	Chemistry of the Industrial Environment	(3 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

BIOS1101	Evolutionary & Functional Biology	(6 UOC)
CVEN2125	Systems Engineering	(3 UOC)
CVEN2525	Introduction to Water Engineering	(3 UOC)
LAWS1072	Contracts 2	(6 UOC)

Plus one of the following courses:

MATH1231	Mathematics 1B, or	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 3**Session One**

CEIC0050	Atmospheric & Process Chemistry	(3 UOC)
CVEN3222	Geotechnical Engineering 2	(3 UOC)
CVEN3438	Transport and the Environment	(3 UOC)
CVEN3526	Water Resources Engineering	(3 UOC)
LAWS1001	Criminal Law 1	(6 UOC)
LAWS6210	Law, Lawyers & Society	(6 UOC)

Session Two

BIOS3301	Population and Community Ecology	(3 UOC)
CVEN3126	Engineering Management 1	(3 UOC)
CVEN3223	Geotechnical Engineering 3	(3 UOC)
CVEN3527	Water Engineering	(3 UOC)
CVEN3531	Principles and Applications of Aquatic Chemistry	(3 UOC)
CVEN3726	Environmental Policy, Law and Economics	(3 UOC)
MATH2019	Engineering Mathematics 2CE	(6 UOC)

Year 4**Session One**

CVEN3025	Engineering Computations 2	(3 UOC)
CVEN3725	Waste Management	(3 UOC)
CVEN4126	Engineering Management 2	(3 UOC)
CVEN4225	Geotechnical Engineering 4	(3 UOC)
CVEN4526	Water and Wastewater Treatment	(3 UOC)
CVEN4533	Transport and Fate of Pollutants	(3 UOC)

Plus ONE of the following courses:

CVEN4000	Honours Thesis Part A	(6 UOC)
CVEN4727	Environmental Engineering Practice 4A	(6 UOC)
CVEN4728	Environmental I Engineering Practice 4B	(6 UOC)
CVEN4729	Environmental I Engineering Practice 4C	(6 UOC)

Session Two

LAWS2160	Administrative Law	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Environmental Engineering Electives		(12 UOC)

Year 5**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law Elective		(4 UOC)

Year 6**Session One**

Law Electives	(24 UOC)

Session Two

Law Electives	(24 UOC)

Total Units of Credit Requirements

Law courses	144 UOC
Engineering courses	144 UOC

Honours

Honours in Engineering: The degree of Bachelor of Engineering may be conferred as a Pass degree or as an Honours degree. There are two classes of Honours, Class I, and Class II in two divisions. The award and grade of Honours are made in recognition of superior performance throughout the program with greater weighting on courses in the later years.

Students must complete an Environmental Engineering thesis to be considered for Honours in Engineering.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

Faculty of Science and Faculty of Law**4770 Bachelor of Science Bachelor of Laws****BSc LLB****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program combines the professional LLB program with the large number of majors offered within the Faculty of Science.

The Science programs provide opportunities for students to prepare themselves for careers in research, technology, science, mathematics and education, or areas of management or public policy which involve the use of science or mathematics.

Major Sequence

(i) Students may select any major from those offered by the Faculty of Science, or a major in **Computer Science** or **Information Systems** which are administered by the School of Computer Science and Engineering and the Faculty of Commerce and Economics. (See separate entry.)

(ii) Students should discuss their choice of major with the Science Student Centre prior to enrolment.

(iii) For the majority of majors students are required to complete only 2 law courses in Year 1. For the **Psychology** major students are required to complete 5. (See separate entry.)

Duration/Award

The program is a five year full-time combined program leading to the award of the two degrees of Bachelor of Science and Bachelor of Laws (BSc LLB).

Assumed Knowledge

Students must satisfy the normal assumed knowledge requirements for entry to the Faculty of Science and to individual courses in that Faculty.

BSc

The degree of Bachelor of Science is not awarded until the completion of the full five year program, but students unable to complete the full program may apply for advanced standing in the Bachelor of Science degree.

Science Courses

Students must complete a minimum of 84 units of credit, including the requirements of one of the majors outlined in Table A in the Science section of the Handbook or a major in Computer Science. In all cases students must include 24 to 36 units of credit of Level 1 courses.

Law or Science Electives

In addition to the prescribed units of credit of law courses and science courses there is the option to complete 8 units of credit of either law or science electives. Students can satisfy this requirement by completing either a law elective (8 units of credit) or an elective approved by the Faculty of Science (6 units of credit) plus a Law Research Project (2 units of credit).

Approved Sequence of Study:

Students must study Science courses in a sequence approved by the Faculty of Science and Law courses in a sequence approved by the Faculty of Law. A typical structure of a combined Science/Law program is set out below. Subject to timetable restrictions, the full range of Science majors are normally available to Law students. The sequence for Computer Science and Psychology majors is detailed separately.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the disciplines of both Science and Law.

Program Structure

Bachelor of Science/Bachelor of Laws

For all plans other than Computer Science major or Psychology.

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
	Science courses (Level 1)	(12 UOC)
	Other approved Science course (Level 1)	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
	Science courses (Level 1)	(12 UOC)
	Other approved Science course - Level 1	(6 UOC)

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
	Science courses	(12 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
	Science courses	(12 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
	Science courses	(12 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
	Science courses	(12 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)

Plus:

Law electives	(8 UOC)
Law or Science electives	(8 UOC)

For the Law or Science elective you can select either:

1 Science elective (6 UOC) + Law Research Project (2UOC), or 1 Law elective (8 UOC).

Year 5

Session One

Law electives	(24 UOC)

Session Two

Law electives	(24 UOC)

UOC Distribution	Number of Courses	UOC
Science		84
Major sequence	7 x 6 UOC	42*
Additional courses	7 x 6 UOC	42
Law		148
Core courses	17	92
Electives	7 x 8 UOC	56
Law or Science elective		8
1 Law elective (8 UOC) or 1 Science elective (6 UOC), plus a Law Research Project (2 UOC)		
Total		240

Bachelor of Science Bachelor of Laws with Major in Computer Science (program 4770, plan code COMPA14770)

Students interested in this major should consult fully with the Student Office of Computer Science and Engineering prior to enrolment.

Year 1 (Computer Science Major)

Session One

LAWS1052	Foundations of Law	(6 UOC)
MATH1081	Discrete Mathematics	(6 UOC)

Plus ONE of the following courses:

COMP1711	Higher Computing 1A	(6 UOC)
COMP1011	Computing 1A	(6 UOC)

Plus ONE of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
	Science elective	(6 UOC)

Plus ONE of the following courses:

COMP1021	Computing 1B	(6 UOC)
COMP1721	Higher Computing 1B	(6 UOC)

Plus ONE of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Year 2 (Computer Science Major)

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
COMP2011	Data Organisation	(6 UOC)
COMP2021	Digital System Structures	(6 UOC)
LAWS2140	Public Law	(3 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
COMP2041	Software Construction	(6 UOC)
	Science elective	(6 UOC)

Year 3 (Computer Science Major)

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)

Science courses including advanced computing electives (12 UOC)

Session Two

LAWS6210	Law, Lawyers and Society	(6 UOC)
LAWS1082	Property and Equity 2	(6 UOC)
Science courses including advanced computing electives		(12 UOC)

Year 4 (Computer Science Major)**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)
Law elective		(8 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law or Science elective		(8 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Year 5 (Computer Science Major)**Session One**

Law electives		(24 UOC)

Session Two

Law electives		(24 UOC)

Bachelor of Science Bachelor of Laws with Major in Psychology (program 4770, plan code **PSYCA14770**)

Year 1 (Psychology Major)**Session One**

LAWS1052	Foundations of Law	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
PSYC1001	Psychology 1A	(6 UOC)
Science course (Level 1)		(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
PSYC1011	Psychology 1B	(6 UOC)
Science course (Level 1)		(6 UOC)

Honours: Students interested in completing Honours must contact the School of Psychology at the end of Year 1.

Year 2 (Psychology Major)**Session One**

LAWS1001	Criminal Law 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
PSYC2001	Research Methods 2	(6 UOC)
Psychology course - 1 x Level 2		(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Psychology courses - 2 x Level 2		(12 UOC)

Year 3 (Psychology Major)**Session One**

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
PSYC3001	Research Methods 3A	(6 UOC)
Psychology course - 1 x Level 3		(6 UOC)
Science course (Level 1)		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
Psychology courses - 2 x Level 3		(12 UOC)
Science course (Level 1)		(6 UOC)

Year 4 (Psychology Major)**Session One**

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)

LAWS4010	Business Associations 1	(6 UOC)
Law elective		(8 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
Law or Science elective		(8 UOC)

Plus ONE of the following courses:

LAWS8820	Law and Social Theory	(6 UOC)
LAWS8320	Legal Theory	(6 UOC)

Year 5 (Psychology Major)

Law electives		(24 UOC)

Session Two

Law electives		(24 UOC)

UOC Distribution	Number of Courses	UOC
Science		84
Psychology major	10 X 6 UOC	60
Additional courses	4 X 6 UOC	24
Law		148
Core courses	17	92
Electives	7 X 8	56
Law or Science Elective		8
1 Law elective (8 UOC) or 1 Science elective (6 UOC), plus a Law Research project (2 UOC)		
Total		240

Honours

Honours in Science: Students wishing to complete the BSc degree program at Honours level must obtain prior approval from the Faculty of Science and the Faculty of Law. A standard Honours program in Science requires an additional year of study. Alternatively students may consider completing a BSc degree program at Honours level (4 years) and then seek admission to the three year LLB degree program for graduates.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

College of Fine Arts and Faculty of Law**4703 Bachelor of Art Theory Bachelor of Laws****BArtTh LLB****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Students undertaking this combined degree program complete the core requirements of both the Bachelor of Art Theory and the Bachelor of Laws. The combined degree allows students to undertake a focused study in the visual arts and culture.

Students completing the BArtTh LLB are likely to gain employment in Arts or Law, but broader opportunities exist for careers in arts management and policy. The professional contexts courses of the BArtTh will enable students to develop career-related skills and experiences and the theoretical/historical contexts courses will provide depth of knowledge about the arts.

Assumed Knowledge

Students must satisfy the normal assumed knowledge requirements for entry to the Faculty of the College of Fine Arts (COFA) and to individual courses in that Faculty.

Program Objectives and Learning Outcomes

At the completion of this program, students will have obtained a sound knowledge base in the fields of both Art Theory and Law.

Program Structure

Program Structure	240 UOC
Law courses	150 UOC
COFA courses	90 UOC
Law Courses	150 UOC
Core courses	92 UOC (17 courses)
Electives	56 UOC (7 x 8 UOC courses)
Law Research Project (Year 4)	2 UOC

The core courses are taken in a specified sequence during Years 1 to 4. Details are given below. After completing the majority of the core courses students are eligible to enrol in electives in Years 4 and 5.

COFA Courses	90 UOC
Art & Design Theory major	60 UOC (10 x 6 UOC)
Contextual Studies	30 UOC (5 x 6 UOC).

Art Theory Plans and Courses

Sequence of Study

For details of the Art Theory study plan and available courses, please refer to the entry for program 4803, the Bachelor of Art Theory in the College of Fine Arts section in this Handbook.

Students must study Art Theory courses in a sequence approved by the College of Fine Arts and law courses in a sequence approved by the School of Law. A direct link to the standard sequence of study is detailed below. Other sequences may be approved under special circumstances.

Year 1

Session One

LAWS1052	Foundations of Law	(6 UOC)
SAHT1101	Mapping the Modern	(6 UOC)
SAHT1211	Theories of the Image	(6 UOC)
SAHT1221	Contexts for Art	(6 UOC)

Session Two

LAWS1061	Torts	(6 UOC)
SAHT1102	Mapping the Postmodern	(6 UOC)
SAHT1212	Theories of Art History and Culture	(6 UOC)
Art Theory Contextual Studies Course		(6 UOC)

Note: Students who wish to take the BArtTh degree program at Honours level must consult with the Head of School of Art Theory at the end of Year 1.

Year 2

Session One

LAWS1001	Criminal Law 1	(6 UOC)
LAWS1071	Contracts 1	(3 UOC)
LAWS2140	Public Law	(3 UOC)
Art Theory Major Course		(6 UOC)
Art Theory Major Course		(6 UOC)

Session Two

LAWS1011	Criminal Law 2	(6 UOC)
LAWS1072	Contracts 2	(6 UOC)
Art Theory Contextual Studies Course		(6 UOC)
Art Theory Major Course		(6 UOC)

Year 3

Session One

LAWS1081	Property, Equity and Trusts 1	(6 UOC)
LAWS2160	Administrative Law	(6 UOC)
Art Theory Major Course		(6 UOC)
Art Theory Contextual Studies Course		(6 UOC)

Session Two

LAWS1082	Property and Equity 2	(6 UOC)
LAWS6210	Law, Lawyers and Society	(6 UOC)
Art Theory Contextual Studies Course		(6 UOC)
Art Theory Major Course		(6 UOC)

Year 4

Session One

LAWS2150	Federal Constitutional Law	(6 UOC)
LAWS2311	Litigation 1	(6 UOC)
LAWS4010	Business Associations 1	(6 UOC)

Plus ONE of the following courses:

LAWS8320	Legal Theory	(6 UOC)
LAWS8820	Law and Social Theory	(6 UOC)

Session Two

LAWS2321	Litigation 2	(6 UOC)
LAWS7420	Advanced Legal Research	(2 UOC)
LAWS2421	Law Research Project	(2 UOC)
Law Elective		(8 UOC)
Art Theory Major Course		(6 UOC)

Year 5

Session One

Law Electives (3 x 8 UOC)	(24 UOC)

Session Two

Law Electives (3 x 8 UOC)	(24 UOC)

General Education Requirements

Students enrolled in combined law degrees are not required to complete General Education courses.

Honours

Honours in Art Theory: Students who wish to take the BArtTh degree program at Honours level must consult with the Head of School of Art Theory at the end of Year 1.

Academic Rules

For Academic Rules relating to the Bachelor of Laws component of this combined degree program, please refer to the program entry for 4790 Bachelor of Laws.

Atax (Australian Taxation Studies Program)

Information and Assistance

Atax delivers tax education across Australia and overseas. It aims to educate tax professionals from all sectors of the tax profession – accounting and legal majors, in the tax groups of large and medium sized corporations, in smaller accounting and law firms and in the Tax Office, State Government Treasury Departments and Revenue Offices. The Atax programs have been developed through intensive consultation with a wide range of experts with interest in both the accounting and legal professions and within UNSW.

Who Can Help?

General correspondence and telephone enquiries relating to student and program administration should be directed to:

Atax Student Services Office

Telephone: (02) 9385 9333

Email: atax@unsw.edu.au

Fax: (02) 9385 9380

Postal Address:

Atax

The University of New South Wales

UNSW Sydney NSW 2052

Australia

Contact details for Academic and General Staff can be found in the Atax Student Guide or on the Atax website:

www.atax.unsw.edu.au/contact/

Academic Support

A range of different academic support services is provided by Atax through the Academic Support Coordinator. These include support packages on general study skills and basic grammar and writing skills.

Atax recognises students come to the Bachelor of Taxation program with a broad range of backgrounds. We are responsive to the diverse needs of students. Atax provides both formal and informal academic support options.

Two audio conferences are conducted each semester. These are intended for new students, although continuing students are also welcome to participate. These Audio Conferences provide an opportunity for students to discuss general study skills and examination preparation issues in a relatively informal environment. Students are also encouraged to refer to the UNSW Learning Centre (www.lc.unsw.edu.au) and Atax Student Guide.

The Academic Support Coordinator is regularly available for informal consultation and can direct students to appropriate resources and services. Additional support services are provided through the UNSW Learning

Centre and other units. The Atax Academic Support Coordinator is the primary contact person for students seeking access to such services. The Student Services Office is able to provide contact details.

Enrolment Procedures

Enrolment procedures for Atax programs vary slightly from conventional mode programs. Closing dates are usually much earlier and students should refer to information distributed by the Atax Student Services and Atax website prior to the commencement of each semester.

Sources of Information

It is important that students familiarise themselves with various documents and sources of information available.

These include:

- the Atax Website (www.atax.unsw.edu.au)
- the Atax Student Guide

Atax Website

You can access the Atax website at www.atax.unsw.edu.au. In addition to general information about Atax, program and course information is available. The website also includes details of conferences and special events, links to individual lecturers' web pages, relevant research links and Atax Library Online.

Atax Student Guide

The *Atax Student Guide* provides ready access to the basics of Atax administration and contains other study resource materials. This guide provides an essential reference point for the Atax student, with contact lists, enrolment information, calendar of events, assessment procedures, and a Library Guide.

Orientation

Orientation sessions for new students are usually held in most Australian cities prior to the commencement of each semester. Study Materials will be dispatched to students prior to Orientation. Orientation serves both academic and administrative purposes, as well as giving students the opportunity to meet lecturers and fellow students.

It is expected that all new students will attend their local Orientation.

Flexible Distance Delivery

Students can study from anywhere in Australia or overseas without attending campus lectures. All Atax students are supported with comprehensive, high-quality written Study Materials. Atax has Learning Centres in 22 locations across Australia and its flexible distance education framework incorporates a variety of modes of teaching to effectively deliver the Atax programs.

Students may find the learning environment differs significantly from traditional campus-based study. Students should refer to the *Atax Student Guide* (provided with Study Materials) or visit www.atax.unsw.edu.au for full information regarding the facilities available:

- Learning Centres
- Study Materials
- Audio Conferences
- Web Course Tools (WebCT)
- Regional Classes*
- Informal Study Groups

* a one-day face to face class in capital cities across Australia.

Library Services

Library staff can provide you with telephone support that will assist you to make the most of the wide range of online resources and reference materials available. They can also assist you to access reference materials from a diverse range of sources. Additional information may be found in the Atax Student Guide in the 'Library Guide' section. Refer also to Atax Library Online at www.atax.unsw.edu.au or contact the Atax library staff directly: Librarian, telephone (02) 9385 9327 or Library Assistant, telephone (02) 9385 9312.

Summary of Programs

Program Titles and Codes

Program code: **4620**
 Program title: **Bachelor of Taxation**
 Qualification Abbreviation: **BTax**

Program code: **7280**
 Program title: **Associate Diploma in Taxation**
 Qualification Abbreviation: **AssocDipTax**

Program code: **6065**
 Program title: **Undergraduate Non-Award Course** (Single Course Study)

Program code: **6028**
 Program title: **Undergraduate Cross-Institutional Course**
 Program code: **6255**
 Program title: **Undergraduate Non-Award Course** (Single Course Study) – ATO Sponsored

Program code: **6257**
 Program title: **Undergraduate Cross-Institutional Course** – ATO Sponsored

Course Unit Values

Except for some General Education courses offered by other UNSW groups, all courses offered through Atax programs are 6 units of credit. Course descriptions for courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook.

Program Rules and Information

4620 Bachelor of Taxation

BTax

Typical Duration

3 years full-time

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Taxation Degree commenced in 1991 and was the first university undergraduate tax degree offered in Australia.

The Bachelor of Taxation can be studied over three years full-time with four courses (or equivalent units of credit) per semester, or six years part-time with two courses (or equivalent) per semester. It is based on the equivalent of 24 courses, of 6 units of credit per course, including 16 core and 8 electives. Some UNSW General Education courses carry only half the credits (3 units of credit) and workload of mainstream courses. Enrolment in such courses could increase the total number of courses to 26.

Students who wish to meet professional accounting entry requirements must study the accounting courses indicated by the Institute of Chartered Accountants in Australia (ICAA) and CPA Australia. (See 'Particular Requirements for Accounting Professional Entry')

Admission Requirements

Entry to the program is competitive. In assessing applications, the Admissions Committee takes into account the following factors:

- educational achievement
- work experience
- evidence of the ability to handle complex technical issues
- evidence of commitment and motivation
- referees' reports, if provided

The normal minimum qualification for admission to the program is NSW matriculation (HSC) or equivalent Year 12 qualifications or completion and award of Certificate IV or Associate Diploma or Advanced Diploma in Accounting or equivalent from a TAFE. Consideration will be given to mature age students with extensive technical experience. Students who do not meet Year 12 or TAFE entry requirements may gain entry after completing a University Preparation Program (UPP).

Applications who are not sponsored in their study by the Tax Office must apply via UAC.

Occupational Destination of Graduates

Atax graduates are leading fulfilling careers in all parts of private and public practice. They are employed by accounting and legal majors, in the tax groups of large and medium sized corporations, in smaller accounting and law firms and in the Federal Treasury, Tax Office, State Government Treasury Departments and Revenue Offices.

The accounting stream of the Bachelor of Taxation Degree has been considered as satisfying the prescribed qualifications criterion of INCOME TAX REGULATION 156 for registration with the Tax Agents' Board.

Professional Accreditation

The Bachelor of Taxation program has been granted accreditation by CPA Australia and the Institute of Chartered Accountants in Australia (ICAA). This means the Bachelor of Taxation satisfies the educational requirements for associate level of membership, provided the student has studied elective courses in the accounting stream of the Bachelor of Taxation. These course choices and study sequences are explained below in the section 'Requirements for Accounting Professional Entry'. The Bachelor of Taxation will also count towards membership of other bodies such as the NIA, ATMA and the TIA – even if the full accounting stream is not followed.

Student Workload

Part-time students will normally complete two courses per semester. Full-time students will normally complete four courses per semester. 'Full-time' students are defined as having a load of 0.75 or more (0.375 per semester). Contact will vary from course to course. As a rough guide, students can expect to spend at least 12 hours per week studying each course.

It is possible to take a lighter workload, studying one course per semester. In special circumstances with approval from the program convener, a heavier load could be taken. That would depend to some extent on the student's prior academic record.

Program Objectives and Learning Outcomes

The objectives of the Bachelor of Taxation are to provide students with:

- a broad-based education in all areas relevant to taxation (including law, accounting, economics and computing) as well as a vocationally specific education;
- knowledge of the basic structure of the Australian tax system, of the essential concepts that underpin taxation, and of the Income Tax Assessment Act and related Acts;
- knowledge of accounting and reporting information, processes and systems, and the integration of such knowledge with the tax system;
- knowledge of legal concepts and principles involved in areas such as contract law, commercial law, administrative law, litigation, company law, banking and finance, property, trusts and equity, and the integration of such knowledge with the tax system;
- skills of statutory interpretation and case analysis;
- skills in organising and solving complex problems by the collection, analysis and application of relevant laws, rules, standards or other information;
- skills of oral and written communication, of negotiation and of advocacy;
- the ability to apply the processes of critical reasoning in evaluating the broad institutional and economic outcomes of tax decisions, including an application of major economic, organisational and information processing concepts;
- the ability to judge appropriate standards of ethical behaviour in their dealings with clients, customers and tax administrators in the tax profession; and
- an awareness of the role of liberal studies as part of a general university education through, in part, the critical analysis of their own professional culture and by exposure in all courses to the broad traditions of critical enquiry.

Program Structure

To complete the Bachelor of Taxation, students are required to do a total of 24-26 courses (or 25-27 if commenced prior to 1999):

- 16 (17 if prior to 1999) compulsory courses
- 2 special category courses
- 4 elective courses
- 2-4 General Education courses to a total of 12 units of credit

Required

ATAX0001	Basic Tax Law and Process	(6 UOC)
ATAX0002	Computer Information Systems	(6 UOC)
ATAX0003	Microeconomics and the Australian Tax System	(6 UOC)
ATAX0004	Framework of Commercial Law	(6 UOC)
ATAX0005	Accounting 1	(6 UOC)
ATAX0006	Tax Administration	(6 UOC)
ATAX0008	Principles of Capital Gains Taxation	(6 UOC)
ATAX0009	Law of Companies, Trusts and Partnerships	(6 UOC)
ATAX0010	Accounting 2	(6 UOC)

ATAX0011	Macroeconomics, Government and the Economy	(6 UOC)
ATAX0013	Taxation of Companies, Trusts and Partnerships	(6 UOC)
ATAX0014	Tax Policy Framework	(6 UOC)
ATAX0015	Intermediate Financial Accounting	(6 UOC)
ATAX0016	Critical Perspectives and Ethics	(6 UOC)
ATAX0017	Tax Accounting Systems	(6 UOC)
ATAX0018	Tax Litigation	(6 UOC)

Special Category Courses

Two of the following **special category courses** must be completed:

ATAX0020	Introduction to Australian International Taxation	(6 UOC)
ATAX0022	GST: Design and Structure	(6 UOC)
ATAX0023	Principles of GST Law	(6 UOC)
ATAX0053	Accounting for Complex Structures and Instruments	(6 UOC)

Elective Courses

Four of the following **elective courses** must be completed:

ATAX0022	GST: Design and Structure	(6 UOC)
ATAX0023	Principles of GST Law	(6 UOC)
ATAX0055	Taxation of Property Transactions	(6 UOC)
ATAX0057	Business Finance	(6 UOC)
ATAX0058	Quantitative Analysis	(6 UOC)
ATAX0059	Management Accounting	(6 UOC)
ATAX0060	Auditing and Assurance Services	(6 UOC)
ATAX0605	Taxation of Trusts	(6 UOC)
ATAX0607	Taxation of Corporate Finance	(6 UOC)
ATAX0610	Taxation of Superannuation	(6 UOC)
ATAX0614	Selected Problems in Stamp Duty	(6 UOC)
ATAX0615	Taxation of Industry and Technology	(6 UOC)
ATAX0625	Taxation of Employee Remuneration	(6 UOC)
ATAX0626	Taxation and Investment Regulation in China	(6 UOC)

Courses designated ATAX06## are postgraduate courses offered at the undergraduate level. They are only available at an advanced stage of the program and only to students who satisfy the relevant course authority they are capable of coping with the demands of the course.

Prerequisites in Courses

ATAX0001	Basic Tax Law and Process for:
ATAX0008	Principles of Capital Gains Taxation
ATAX0009	Law of Companies, Trusts and Partnerships
ATAX0016	Critical Perspectives and Ethics
ATAX0017	Tax Accounting Systems
ATAX0018	Tax Litigation
ATAX0020	Introduction to Australian International Taxation
ATAX0022	GST: Design and Structure
ATAX0023	Principles of GST Law
ATAX0003	Microeconomics and the Australian Tax System for:
ATAX0014	Tax Policy Framework
ATAX0057	Business Finance
ATAX0005	Accounting 1 for:
ATAX0010	Accounting 2
ATAX0017	Tax Accounting Systems
ATAX0006	Tax Administration for:
ATAX0018	Tax Litigation
ATAX0008	Principles of Capital Gains Taxation (or equivalent) for:
ATAX0055	Taxation of Property Transactions
ATAX0009	Law of Companies, Trusts and Partnerships for:
ATAX0013	Taxation of Companies, Trusts and Partnerships
ATAX0020	Introduction to Australian International Taxation
ATAX0010	Accounting 2 for:
ATAX0015	Intermediate Financial Accounting
ATAX0057	Business Finance
ATAX0059	Management Accounting
ATAX0015	Intermediate Financial Accounting for:
ATAX0053	Accounting for Complex Structures and Instruments
ATAX0060	Auditing and Assurance Services
ATAX0023	Principles of Goods and Services Tax Law (or equivalent) for:
ATAX0055	Taxation of Property Transactions
ATAX0058	Quantitative Analysis for
ATAX0057	Business Finance

Particular Requirements for Accounting Professional Entry

Students wanting to gain accounting admission must study the following:

ATAX0053 Accounting for Complex Structures and Instruments (6 UOC)

Also one of the following three other special category courses must be chosen:

ATAX0020 Introduction to Australian International Taxation (6 UOC)

ATAX0022 GST: Design and Structure (6 UOC)

ATAX0023 Principles of GST Law (6 UOC)

Finally, three of the four general electives must be accounting courses. The following three elective courses must be chosen:

ATAX0057 Business Finance (6 UOC)

ATAX0059 Management Accounting (6 UOC)

ATAX0060 Auditing and Assurance Services (6 UOC)

Hence in practice the only decision to be made for students seeking professional accounting entry is between ATAX0020, ATAX0022 and ATAX0023, which are general electives and in the General Education area.

However, Atax also recommends that ATAX0058 be studied as the extra general elective before attempting ATAX0057. As requirements change from time to time, students should check any updates or changes to requirements later in their degree program.

General Education Requirements

Students enrolled in this program must also satisfy the University's General Education requirements.

Twelve units of credit of General Education must be successfully completed. General Education requirements may, with the prior approval of the BTax Convenor, be fulfilled by completion of courses offered in other faculties within UNSW or at other universities. Some of these courses have lower credit value and workload than Atax courses.

Academic Rules

Assessment Policy

The Board of Studies in Taxation has resolved that, in order to pass a course, candidates for the Bachelor of Taxation should obtain:

1. 50% or more of the total marks available in the course and
2. A minimum of 40% of the marks available for the final examination in the course.

Bachelor of Taxation Degree with Distinction

The Assessment Committee of the Board of Studies in Taxation may award the Bachelor of Taxation degree with Distinction when a student satisfies the condition of a 75% weighted average mark (WAM) attained over the student's degree.

Bachelor of Taxation Degree with Merit

For students who entered the Bachelor of Taxation program prior to 2003, the Assessment Committee of the Board of Studies in Taxation may award the Bachelor of Taxation Degree with Merit when a student satisfies the following conditions:

- a 70% average is attained over the student's best prescribed merit award number of courses presented for the degree (see table below); and
- the student does not have more than two failures throughout the program.

Provided that where, in the opinion of the Examiners at the Assessment Committee, 'exceptional circumstances' exist the Assessment Committee may award the degree with Merit even though a student has not attained a 70% average and/or has three failures throughout the program.

Prescribed merit award number of courses table

Students enrolled in BTax prior to 2003 and therefore eligible for award of either the BTax with Merit or the BTax with Distinction have the option of taking out one or the other award.

Exemption Policy/Advanced Standing

Students accepted for enrolment into the Bachelor of Taxation Degree may apply for advanced standing (exemptions from study of particular courses) by completing the form Course Exemption/Advanced Standing. This is available for download from the Atax website at www.atax.unsw.edu.au/students/forms

Where the number of courses you must complete to qualify for Bachelor of Taxation (after deducting those for which you have been granted exemption) is:	Your prescribed merit award number of courses is:
25	20
24	20
23	19
22	18
21	17
20	16
19	16
18	15
17	14
16	13

Maximum exemption for the BTax is for eight courses of 6 units of credit. The policy on advanced standing for BTax can be accessed via the Atax website at www.atax.unsw.edu.au/study/exemptions.htm#btaxpol

7280 Associate Diploma in Taxation

AssocDipTax

2.5 years full-time

The Associate Diploma in Taxation is not available to students commencing undergraduate study in 2002 or later. For information on this program please refer to www.atax.unsw.edu.au

Non-Award (Single Course), Cross-Institutional and Cross-Group (Faculty) Enrolments

Introduction and Overview

Non-Award enrolments are enrolments in courses or a sequence of courses, which do not lead to, nor (normally) count towards, a formal award of UNSW.

Non-Award study with Atax may count towards Continuing Professional Education (CPE), Continuing Professional Development (CPD) and Continuing Legal Education (CLE) requirements for Chartered Accountants, Certified Practising Accountants and lawyers respectively.

There are several categories of Non-Award enrolment:

1. **Voluntary course enrolment** – where the student is taking the course either out of interest or to develop professional competence in an area of specialisation.
2. **Cross-Institutional enrolment** – where the student enrolls in a UNSW course for credit towards an award at another tertiary institution, at which the student is concurrently enrolled.
3. **Cross-Group enrolment** – where a student from another group (faculty) of UNSW applies to study an Atax course. Written confirmation is required from the other group stating that the course will be credited towards the award.
4. Where an Atax student wishes to enrol in a course at another institution for credit towards their UNSW award, any such courses must be of similar content and level to the corresponding Atax course and specific reasons for the request are required. Atax will normally approve this type of enrolment in special circumstances only. Students are required to complete the normal enrolment procedure at UNSW in order to have the course credited towards their degree.

Cross-Institutional Enrolment Procedures

Procedures for an Atax student entering into a cross-institutional scheme are as follows:

1. Forward full details of the course, including unit of credit value, assessment and content, to the Atax Student Services Office. Outline why you consider the circumstances to be special and indicate the Atax course for which it would be substituted.
2. Your application will then be considered and you will receive written advice regarding its success or otherwise.
3. Make an application to the host institution, presenting approval from Atax (check with the host institution for appropriate procedures).
4. Notify Atax of acceptance by the host institution.
5. Forward a certified copy of the official result (mark and grade) from the course studied at the host institution to Atax once the course assessment has been finalised.

Cross-Group Enrolment Procedures

Students intending to:

- add/vary Atax courses to/in a program of study from another Group or School within UNSW; or
- add/vary courses from another Group or School within UNSW, to an Atax program;

are strongly advised to contact the Atax Student Services Office so transition arrangements can be effected smoothly. You must ascertain the availability of particular courses and the semesters in which they will be offered. You should arrange for your program authority to provide written approval that the Cross-Group course will be credited to your award program. Also arrangements for delivery/collection of study materials and associated support need to be communicated.

Students based in the Law School in UNSW are regarded as falling within these arrangements.

Faculty of Medicine

A Message from the Dean

It is my pleasure to welcome you to the Faculty of Medicine at the University of New South Wales.

I would like to focus on who we are and what we stand for. An underlying principle at UNSW, and especially in the Faculty of Medicine, is the link between teaching and research. Our staff tell us that they want to work with us because they have the opportunity to pursue their research and to teach. In addition, many of our staff are doctors and other health care professionals who make major contributions to the delivery of clinical care, particularly in the public hospital system. As well as our full-time salaried staff, more than a thousand doctors attached to hospitals and working in the communities have unpaid conjoint appointments with us and make enormous contributions to teaching and research.

UNSW Medicine has a strong presence at the Kensington campus. In addition, staff and students are based in teaching hospitals in Sydney, Wollongong and regional and rural areas, especially Albury/Wodonga, Wagga Wagga, Coffs Harbour and Port Macquarie.

The Undergraduate Program in Medicine is a central focus. We also have undergraduate programs in Health and Exercise Science, and in Medical Science. There is a diverse array of postgraduate coursework programs such as the Masters in Public Health. Postgraduate research focuses on research masters, PhD and MD programs in all of the clinical, basic science and social science disciplines.

Our students are another rich resource in the Faculty. There is a broad mix of students from many backgrounds and metropolitan, rural and international students are all represented in large numbers. Our teaching and learning methods encourage a student-centred approach and acknowledgement that our staff and our students are our two richest resources.

We remain committed to a learning environment where research and teaching are closely intertwined and where we have close relationships with the healthcare system.

Once again, welcome to the Faculty of Medicine. I hope that you will find the information that you need by browsing through these pages. Should you wish to ask a more specific question, do not hesitate to contact the Faculty Office.

Professor Richard Henry
Acting Dean

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Faculty Information and Assistance

Who Can Help?

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of Medicine.

If you require advice about enrolment, degree requirements, progression within Programs or with any other general Faculty matter, contact one of the following people located in the Office of the Dean (map reference B27), Faculty of Medicine:

Undergraduate

Justin Joynes
Administrative Officer
Faculty of Medicine
Tel: (02) 9385 2459
Email: j.joynes@unsw.edu.au

General and Admission Enquiries

Office of the Dean
Faculty of Medicine
Tel: (02) 9385 8765
Fax: (02) 9385 1874
Email: info@notes.med.unsw.edu.au.

Elective term/Clerkships

Peter Herring
Administrative Assistant
Faculty of Medicine
Tel: (02) 9385 2452
Email: p.herring@unsw.edu.au

Faculty of Medicine Website

The Faculty of Medicine's website address is www.med.unsw.edu.au

This website provides information about programs, courses, research interests, news and current events. The website also contains links to all the schools, units, centres and the affiliated research institutes of the Faculty, as well as staff, student and alumni information resources. The Faculty maintains many PC and Macintosh computer laboratories for student access, both on campus and in the Faculty's teaching hospitals. Students can access the web, email, MS Office and educational applications from these computers.

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at www.handbook.unsw.edu.au

The Faculty

The Faculty of Medicine was established when the NSW Government accepted a proposal of the Murray Committee of Inquiry into the Future of Australian Universities and announced in December, 1957, that a second medical school in NSW would be established within the re-named University of New South Wales.

The Faculty's first students enrolled in 1961 and 25 of these graduated from the six-year program in 1966. A five-year undergraduate curriculum was introduced in 1974. Although this was a highly successful curriculum, a number of changes in both the hospital and health systems indicated the need for the Faculty to extend the program to a six-year curriculum in 1988. 2004 saw the beginning of a new six year Medicine program designed to suit the needs of 21st century graduates.

The Faculty of Medicine consists of all members of the academic staff, both full-time academics as well as conjoint and adjunct appointees from teaching hospitals, student representatives and other persons nominated by the Faculty. The Presiding Member is elected biennially from the professors and associate professors of the Faculty.

The Dean is the principal channel of communication between the Faculty and the University on administrative matters. The Dean and the Faculty are supported by a number of committees, some of which perform administrative tasks, while many assist in maintaining a constant review of the curriculum and the objectives of medical education.

Goals of the Faculty

The primary mission of the Faculty is the pursuit of excellence in medical and biomedical education within a scholarly environment of research and discovery.

Application Procedures

Details on application for entry into UNSW medicine programs for both local students and international students can be found on the Faculty's website at www.med.unsw.edu.au

Selection into the Medicine Program

The Faculty of Medicine implemented new admissions criteria for entry into the UNSW medicine programs from 2003 for both local and international students. Students are selected on the basis of academic merit, results of the Undergraduate Medicine and Health Sciences Admission Test (UMAT) and performance at an interview. Some international applicants are exempt from sitting UMAT due to their place of residence. Further details of the selection process can be found on the Faculty's website at www.med.unsw.edu.au

International Students

International applicants may only compete for entry as either fee-paying students or as holders of a scholarship awarded by the Australian Government. Enquiries regarding admission of international students should be directed either to UNSW International (tel: +61 2 9385 6996 email: internationaloffice@unsw.edu.au, website: www.international.unsw.edu.au) or the Admissions Officer, Faculty of Medicine, both at the University of New South Wales, Sydney NSW 2052, Australia. Enquiries regarding Australian Government scholarships should be directed to the local Australian Diplomatic Mission or see www.ausaid.gov.au

Admission of Indigenous Students

The Faculty may admit suitably qualified Aboriginal and Torres Strait Islander people. A pre-Medicine program, run for one month, is part of the preparation and selection processes for indigenous students applying

for the Medicine program. Further information regarding the admission criteria may be obtained from the Faculty's Indigenous Health Unit on (02) 9385 3677.

Admission of Disadvantaged Students (ACCESS Scheme)

The Faculty may admit, within quota, a number of students whose education has been disadvantaged over a two-year period by circumstances beyond their control. Further information may be obtained from the Admissions Office on (02) 9385 3089.

Rural Student Entry Scheme

The Faculty sets aside places in its Medicine program intake each year for students of rural origin who are able to demonstrate to the Faculty that they meet a number of selection criteria. The scheme is designed for high school, undergraduate and graduate students. It is expected that students who gain entry via the Rural Student Entry Scheme will be allocated to a rural hospital and undertake the majority of their final three years in rural hospitals. Further information may be obtained from the Faculty's Rural Health Unit on (02) 9385 3250 or the website www.rural.med.unsw.edu.au

Assumed Knowledge

There are no prerequisites for entry into the new Medicine program. However there is assumed knowledge of English. Assumed knowledge is a level of achievement at the HSC (or equivalent) considered desirable for successful study in a program or first year course. Students who do not have the assumed level of knowledge are not prevented from enrolling, but may be placed at a considerable disadvantage. It is assumed that upon enrolment students have an adequate command of English language and communication skills.

Costs in Addition to Fees

In all UNSW medicine programs, there are costs in addition to fees. The following is an estimate, based on students' experience, of the expenditure which is likely to be incurred over the full length of the program. The amounts quoted are subject to some variation.

	\$ approx.
Textbooks	1,750
Two coats (1 laboratory, 1 hospital)*	70
Stethoscope	80–300
Ophthalmoscope	180–250
Laboratory Manuals	200
Miscellaneous (papers, pens, kits, diagnostic equipment and aids, etc.)	350

**One long white coat is required for use in practical classes and one short coat for use in the hospitals.*

Advice to Students on Computing Requirements and Email Policy

For details on computer recommendations and specifications see the *IT Requirements for UNSW Students* policy at: www.its.unsw.edu.au/policies/policies_home.html

All official email from the Faculty of Medicine will be sent to students' UNSW email accounts. It is expected that all UNSW students will either routinely check their UNSW email account or have their UNSW email account forwarded to another email address. Information about managing your UNSW email account can be obtained from: www.disconnect.unsw.edu.au

Attendance at, and Residence in, Hospitals

From Year 1, students attend hospitals for clinical teaching. For Years 1 to 3 (Year 4 from 2007), students are allocated to a large teaching hospital in Sydney known as their "home hospital". During the final three years, students are required to undertake some terms in hospitals other than their home hospital. These terms are in other hospitals in Sydney and also in selected larger country hospitals. It is expected that students who gain entry via the Rural Student Entry Scheme will be allocated to a rural hospital and undertake at least 12 months of their final two years in rural hospitals. Other local students may have the option or be required to undertake at least 12 months of studies in rural hospitals. International students are not usually given this option of undertaking an extended placement in rural hospitals. However all students should expect at least 4 weeks in a rural rotation. The Faculty will always consider the personal preferences of students in their allocation to home hospitals and to other hospitals on rotation. However, the Faculty reserves the right to allocate students to hospitals that are not their first preference. Students

considering applying for entry into a UNSW medicine program must take this into consideration and be willing to undertake their training in a range of hospital and health care facilities. The Faculty's policy on 'Allocation of Students to Clinical Locations' can be found on the website at www.med.unsw.edu.au

Intern Placement and Registration

Each medical graduate seeking registration as a medical practitioner in NSW must complete a period as an intern in a hospital or institution approved by the NSW Medical Board. Before taking up an intern appointment, a graduate must obtain a certificate of conditional registration from the Medical Board.

Intern placement is the responsibility of the Postgraduate Medical Council of the NSW Department of Health. Information concerning intern placement and conditional registration is issued to each student by the Office of the Dean during the final year. Information may also be obtained from:

Internship: The Postgraduate Medical Council, Gladesville Hospital Campus, Victoria Road, Gladesville NSW 2111, Tel: 9817 0551 or see www.pmc.nsw.gov.au

Registration: The Registrar, Medical Board of New South Wales, Gladesville Hospital Campus, off Punt Road, Gladesville, Tel: 9879 6799 or see www.nswmb.org.au

Part-time Training and Deferment of Internship

The NSW Medical Board has no objection, in principle, to interns undertaking up to one-half of their internship on a reduced daily hours basis, or deferring internship in limited circumstances. Interns considering these options should contact the Board for further details.

Criminal Record Check

The NSW Department of Health has a policy that all students undertaking clinical placements or who require access in any capacity to facilities operated by the Department (this includes all the Teaching Hospitals used by UNSW in its Medicine programs) must undergo a criminal record check prior to employment or placement in the NSW Health System. The check is conducted by the NSW Police Service and is coordinated by the Department of Health and the University. Further details are available on the Faculty's website at www.med.unsw.edu.au

Clinical placement in the NSW Health System is a substantial and essential element in all UNSW medicine programs. Students who fail to satisfy the requirements of this check at any point during their enrolment in a UNSW medicine program will be excluded from the program. Depending upon the circumstances at the time, students may be eligible to transfer to another program of the University.

Working with Children

Under the *Commission for Children and Young People Act 1998* and the *Child Protection (Prohibited Employment) Act 1998*, students who as part of their enrolment are required to have direct contact with children must declare whether they are a 'prohibited person', that is whether they have been convicted of a serious sex offence. It is an offence for a 'prohibited person' to work with children.

Clinical placement in Paediatrics is an essential element in all UNSW medicine programs. Any student who is a 'Prohibited Person' at any point during their enrolment in a UNSW medicine program will be excluded from the program. Depending upon the circumstances at the time, students may be eligible to transfer to another program of the University.

Students with Blood-borne Viruses and Immunisation for Students

In order to be enrolled in any UNSW medicine programs, students must agree to comply with the Faculty's Immunisation and Blood-borne Viruses Policy, which aims to minimise the risk of medical students contracting or spreading an infectious disease or blood-borne virus, such as HIV, and Hepatitis B or C. Students must also be registered with the NSW Medical Board. Registrants with the Board (including student registrants) who undertake, or could reasonably be expected to undertake, exposure-prone procedures have a professional responsibility to take appropriate steps to know their infective status in relation to blood-borne viruses. All students in all UNSW medicine programs could ordinarily be expected to undertake exposure-prone procedures and all students in the programs must know their infective status. A registrant (student) who is aware he or she has a blood-borne virus infection must not undertake exposure-prone procedures.

Any infective student who knowingly undertakes an exposure-prone procedure or any student who in any other way endangers the health

of patients will be reported to the Medical Board's Impaired Practitioner Program. This may result in registration being withdrawn, which will result in expulsion from UNSW Medicine and the Medicine programs. Such a student would also be subject to the University's Student Misconduct procedures and may further be liable to criminal prosecution if a blood-borne virus is knowingly transmitted.

The Immunisation and Blood-borne Viruses Policy of the Faculty of Medicine is found on the website at www.med.unsw.edu.au. Students are required to sign a statement indicating that they have read and agree to comply with this policy at the time of enrolment.

Registration with the NSW Medical Board

Under the Medical Practice Act, all medical students in NSW must be registered with the Board as a prerequisite to undertaking a course of medical study at a medical school in the State. Applications for registration are completed on initial enrolment and upgraded annually. Further details are available on the Board's website at www.nswmb.org.au

Special Consideration

In order to ensure that students experiencing difficulties which may in turn affect the successful completion of their course assessment are seen and assisted by the Student Affairs Coordinator, a set of guidelines has been established to provide the framework within which the process and operation of a preliminary consideration regime will operate.

These guidelines are publicised in relevant student literature including the Handbook, ensuring that all students in the MBBS program are aware of the availability of assistance and of the details of the process.

Please note: This process does not prevent or discourage a student from discussing their circumstances with the Course Coordinator. Further, these guidelines are intended to be preliminary to the operation of the UNSW Special Consideration Policy. Students may at any time prefer to rely on the provisions of that policy.

Guidelines:

A. Students with a temporary or reversible medical problem or social situation which has impaired their capacity to prepare for or sit for an assessment. Students should approach the Student Affairs Coordinator to explain their situation as soon as possible.

(1) The Student Affairs Coordinator may require a medical certificate or other documentation to support the claim.

(2) The Student Affairs Coordinator will advise the student whether s/he will support their application for special consideration to the Assessment Review Group should it need to be considered.

(3) If special consideration is granted and the student chooses to sit the assessment, the assessment would be marked in the usual way.

(4) If the student passes the assessment, then the matter will be taken no further.

(5) If the student fails the assessment, the Student Affairs Coordinator will attend the relevant Assessment Review Group meeting and present the case for special consideration.

(6) If the Assessment Review Group supports the Student Affairs Coordinator's view that special consideration should be granted, the student will be allowed to re-sit the assessment without penalty, that is as though the next assessment was the first time that the student had attempted the assessment.

(7) No upward grading of a mark will occur – if a student passes the assessment at which s/he was eligible for special consideration the mark received will stand and will not be up-graded.

Please note that for special consideration to be granted in this category, there needs to be a belief that the problem leading to the granting of special consideration will have resolved significantly by the time of further assessment.

B. Where a problem occurs during an assessment.

(1) Where this occurs, the Student Affairs Coordinator should be notified at the earliest possible time and within 48 hours of the assessment, unless there are exceptional circumstances.

(2) If the opinion of the Student Affairs Coordinator is that the student was moderately or significantly impaired during the assessment, the Student Affairs Coordinator will represent this opinion at the meeting of the Assessment Review Group.

(3) If the student was able to complete a significant proportion of the examination prior to the acute event occurring, it may be possible to base the student mark on the proportion of the examination completed prior to the problem.

- (4) In other situations the total mark obtained by the student may be the only mark that it is possible to derive.
- (5) If the student obtains a passing performance, then that could be regarded as the student's mark.
- (6) If the student failed that assessment s/he would be allowed to re-sit a subsequent assessment as though this were their first attempt.

Student Photographs and Identification Badges

In Year 1 of all UNSW medicine programs, each student is required to be photographed during the first session. These photographs are required for School and Faculty purposes. Hospitals also photograph students to produce identification badges, which must be worn in the hospitals.

Special Note on Working as a Doctor

Working as a doctor is both physically and emotionally demanding. They are exposed to stress and disease. If intending applicants have any concerns about these issues or if they are aware of any reason (such as a chronic illness, a disability or a criminal conviction) or any impairment that might make it difficult to gain medical student registration with the NSW Medical Board or to practise as a doctor after graduating from UNSW, they are urged to speak about these important matters in confidence with one of our independent Faculty advisers. To arrange this, telephone the Faculty's Student Affairs Coordinator on (02) 9385 3547.

Faculty Student Organisations

The University of NSW Medical Society (Medsoc)

The University of New South Wales Medical Society (Medsoc) is the representative body of the medical students of the University. Further information can be found on the website at: www.medsoc.org.au

Rural Allied Health & Medical Society (RAHMS)

The Rural Allied Health and Medical Society (RAHMS) is a club for allied health and medical students at UNSW from rural, urban and international backgrounds with an interest in rural, indigenous and international health issues. For further information, contact the Rural Health Unit on (02) 9385 3250 or visit their website on <http://rural.med.unsw.edu.au/rhu.nsf/website/clubs.RAHMS>

Clinical Learning Environments

South Eastern Sydney and Illawarra Area Health Service

Website: www.sesiahs.health.nsw.gov.au

The Prince Henry/The Prince of Wales Hospitals

Barker Street, Randwick 2031

Tel: (02) 9382 2222, Fax: (02) 9382 2233

The Prince Henry and The Prince of Wales Hospitals were joined under a common management in 1961 to form the principal teaching hospitals for the Medical School of the University of NSW.

The Prince of Wales Hospital has recently undergone a period of major redevelopment to enable all acute services to be accommodated on the Randwick Campus, which it shares with the Sydney Children's Hospital, the Royal Hospital for Women and the Prince of Wales Private Hospital.

The Prince Henry and Prince of Wales Hospitals currently cover all specialties and sub-specialties. In addition, statewide services provided include: Hyperbaric Medicine Unit, Spinal Injuries, Lithotripsy, HIV Special Unit and the Albion Street Centre.

Sydney Children's Hospital

High Street, Randwick 2031

Tel: (02) 9382 1111, Fax: (02) 9382 1777

This is a paediatric tertiary referral hospital serving the whole of the state, one of three such children's hospitals in NSW and is located at the Randwick campus. It has close links through specialist and resident staff with other teaching and associated hospitals. It provides a complete range of paediatric services and has strong links with complementary adult services at Prince Henry and Prince of Wales Hospitals. There are also strong links with community-based child health services and local private practitioners.

The Royal Hospital for Women

Barker Street, Randwick 2031

Tel: (02) 9382 6111, Fax: (02) 9382 6513

The Royal Hospital for Women is the University's principal teaching hospital in obstetrics and gynaecology.

There are approximately 4,000 births annually and over 6,500 gynaecological procedures. It is a specialist hospital for obstetrics and gynaecology and includes a department of neonatal paediatrics. The Hospital has established the Department of Endo-Gynaecology and the Natural Therapies Unit, where natural products are actively researched. The first baby health clinic in NSW, the forerunner of today's Early Childhood Health Centres, was established here in 1906. The State's first Antenatal Clinic was also started at the Royal Hospital for Women in 1912.

The Hospital's Department of Medical Imaging has an international reputation for research and development of ultrasound technique and equipment in obstetrics as does the Gynaecological Oncology Centre, for its work on ovarian cancer and gynaecological malignancy.

The St George Hospital & Community Health Service

Gray Street, Kogarah 2217

Tel: (02) 9350 1111, Fax: (02) 9350 3999

The St George Hospital & Community Health Service is one of Sydney's busiest principal referral hospitals. Designated as a major Trauma Service, the hospital accepts referrals from outside its immediate area as well as serving a local district population of approximately 225,000 (of whom more than 25% were born overseas). It has the busiest Emergency Department in metropolitan Sydney. It is a state-of-the-art hospital which covers all general areas of medicine (excluding heart and liver transplants). A Private Hospital is located adjacent to the campus.

The St Vincent's Hospital

Victoria Street, Darlinghurst 2010

Tel: (02) 8382 1111, Fax: (02) 8382 4142

St Vincent's Hospital is a principal referral hospital operated by the Sisters of Charity. It is an acute general hospital with highly developed specialist units in adult medicine and surgery and diagnostic services. The Hospital provides referral services for NSW and Australia and services for the local community. Specialty services at the Hospital include cardiac transplantation, bone marrow transplantation, a Cancer Care Centre which provides an integrated approach to the management of malignancy, a comprehensive AIDS service and a specialist Palliative Care Institute (Sacred Heart Hospice). Extensive primary and secondary services are also provided to meet the needs of the local community and these include medical, surgical, geriatric and drug and alcohol services.

St Vincent's is part of the integrated campus of the Sisters of Charity which comprises St Vincent's Private Hospital, the Garvan Institute of Medical Research, the Victor Chang Cardiac Research Institute, St Vincent's Clinic and the Centre for Immunology.

Calvary Hospital Kogarah Inc

91 Rocky Point Road, Kogarah 2217

PO Box 261 Kogarah 1485

Tel: (02) 9587 8333, Fax: (02) 9587 1421

Calvary Hospital Kogarah Inc is an Affiliated Health Organisation conducted by the Sisters of the Little Company of Mary. The Hospital was opened in 1966 and provides multidisciplinary palliative care services for 80 inpatients and day-only admissions. The Hospital has a 20-bed Geriatric Rehabilitation Unit, full multidisciplinary team and therapy gymnasium.

There is a Community Palliative Care Team offering holistic, family-orientated care to people with terminal illnesses within the South Eastern Sydney Area Health Service who choose to live at home. An Outpatient Pain Clinic is available at Calvary for these and other patients. Calvary staff offer a consultative service to nursing homes and private hospitals.

The Langton Centre

Corner Nobbs and South Dowling Streets, Surry Hills 2010

Tel: (02) 9332 8777, Fax: (02) 9332 28700

The Langton Centre is a specialist agency for the treatment of addictions. The Centre provides medicated detoxification, group and individual counselling, and medical and psychological interventions for dependent drug users. The Centre operates a methadone maintenance clinic and a needle and syringe exchange program.

St Luke's Hospital Complex

18 Roslyn Street, Potts Point 2011

Tel: (02) 9356 0200, Fax: (02) 9357 2334

St Luke's Hospital Complex, provides acute hospital, nursing home and aged care services. St. Luke's (Private) Hospital is a 108 bed acute General Hospital providing comprehensive surgical, medical and rehabilitation care. Facilities include operating theatres, an intensive care unit, a day surgery/procedures unit, endoscopy unit, telemetry/sleep studies unit,

rehabilitation unit including hydrotherapy pool and diagnostic radiology service, including CT Scan. It also has a purpose built Day Rehabilitation and Injury Management Centre.

Shellharbour Hospital

The Shellharbour Hospital has 150 beds and provides emergency, medical, surgical, obstetric and psychiatric services.

Shoalhaven Hospital

Shoalhaven Hospital is a 143 bed, level 4, district hospital for the Shoalhaven region, providing emergency, elective orthopaedic and plastic surgery, medical, ICU, obstetric, gynaecologic, paediatric, neonatal care as well as rehabilitation services.

Sutherland Hospital Caringbah

Kingsway, Caringbah 2229
Tel: (02) 9540 7111, Fax: (02) 9540 7197

The Sutherland Hospital Caringbah, was founded in 1958. It is a general medical, surgical and obstetric hospital, with various sub-specialties. There are also psychiatric and rehabilitation, oncology and day surgery units, a paediatric ward, and a busy emergency department. Based in the rapidly expanding South Eastern suburbs, the hospital serves an approximate population of 200,000.

Sydney Hospital and Sydney Eye Hospital

Macquarie Street, Sydney 2000
Tel: (02) 9382 7111, Fax: (02) 9382 7320

Sydney Hospital and Sydney Eye Hospital has an Accident and Emergency Service. It provides inpatient and outpatient services in general medicine, general surgery, orthopaedics, ENT, hand surgery, and ophthalmology (including the Lions Eye Bank and Save Sight Institute), Sydney Artificial Eyes, Sydney Sexual Health Centre, Kirketon Road Centre in Kings Cross and the Langton Centre in Surry Hills.

War Memorial Hospital Waverley

125 Birrell Street, Waverley 2024
Tel: (02) 9369 0100, Fax: (02) 9387 7018

War Memorial Hospital, Waverley, is under the governance of the Uniting Church. The hospital runs a geriatric rehabilitation and assessment unit, a rehabilitation outpatients service, a short stay residential respite unit, a day care unit - which provides services for both frail and dementia clients and non-English speaking background groups - and podiatry outpatient services. A hydrotherapy pool supports the inpatient rehabilitation services. The War Memorial Hospital also supports an aged care assessment team, a number of specialist clinics and services, and provides office accommodation for the Waverley Community Team.

Wollongong Hospital

Wollongong Hospital is the major teaching and referral hospital for the Illawarra Area. It provides emergency care, specialist medical and surgical services, intensive care and major diagnostic, maternal and paediatric services for patients referred from throughout the Illawarra. The Wollongong and Port Kembla Hospitals provide complementary services with all acute services located at the Wollongong Hospital.

The Port Kembla Hospital comprises 52 beds for Rehabilitation and Psychiatry Services, and the Wollongong Hospital with 240 beds provides a full range of tertiary services.

Corrections Health Service

Long Bay Correctional Centre

Anzac Parade, Little Bay, 2036
Tel: (02) 9289 2977, Fax: (02) 9311 3005

CHS provides and coordinates a comprehensive range of health services for people in custody within the NSW Correctional System. Major clinical programs include General Practice and Primary Health Care, General Medicine/Surgery, Mental Health Programs, Drug and Alcohol Services, Population Health, Indigenous People's Health Services, Dental and Imaging Services.

The Sydney South Western Area Health Service

Website: www.swsahs.nsw.gov.au

Liverpool Hospital

Elizabeth St, Liverpool, 2170
Tel: (02) 9282 3000, Fax: (02) 6318

The SWSCS is centred at Liverpool Hospital (600 beds), a principal tertiary referral hospital for the South Western Sydney Area Health Service (SWSAHS). It provides services in all the sub-specialties of internal medicine, general surgery including orthopaedics and plastic surgery,

pathology and imaging. It has a Brain Injury Centre and a Cancer Therapy Centre which includes rehabilitation and palliative care.

Bankstown-Lidcombe Hospital

Eldridge Rd, Bankstown, 2200
Tel: (02) 9722 8000, Fax: (02) 9722 8570

This is a major metropolitan acute general hospital providing 454 beds and caters for approximately 30,000 inpatient separations per year. The hospital offers services such as general medicine and surgery, obstetrics, paediatrics, emergency, intensive care, day surgery, endoscopy, psychiatry, neonatology, pathology and imaging.

The Greater Southern Health Service

Wagga Wagga Base Hospital

PO Box 159, Wagga Wagga NSW 2650
Tel: (02) 6938 6666, Fax: (02) 6921 8243
Website: www.gmahs.nsw.gov.au

Wagga Wagga Base Hospital is a 220 bed acute regional hospital and has specialists in most major disciplines (medicine, paediatrics, surgery, orthopaedics, anaesthetics, obstetrics and gynaecology, ENT, ophthalmology, geriatrics rehabilitation, psychiatry and emergency medicine). The Base Hospital is a significant teaching hospital boasting registrars in medicine, surgery, orthopaedics, anaesthetics, obstetrics and gynaecology and is a primary allocation centre.

Albury Base Hospital

PO Box 326, Albury NSW 2640
Tel: (02) 6058 4444, Fax: (02) 6058 4504

Albury Base Hospital is a modern 155 bed facility providing specialist services to the Albury-Wodonga and the surrounding parts of southwestern NSW and northeastern Victoria. The hospital is the designated regional trauma centre for the region, with a catchment population of approximately 150,000 people. The hospital has a suitably appointed and staffed intensive care unit and emergency department, both of which are accredited for training by many of the Specialist Medical Colleges.

Wodonga Regional Health

P.O. Box 156, Wodonga, VIC 3689
Tel: (02) 6051 7111, Fax: (02) 6051 7477

The Wodonga Regional Health Service is located in the rural city of Wodonga. Together with the border city of Albury, the Albury-Wodonga district is home to over 90,000 people. The Health Service provides a range of hospital and community health care services including Obstetrics, General Medicine, General Surgery, Acute Care, Paediatrics, Emergency, Mental Health, Medical Imaging and Aged, Rehabilitation and Allied Health care.

Griffith Base Hospital

PO Box 1013, Griffith NSW 2680
Tel: (02) 6962 8333 Fax: (02) 6964 1587

Griffith Base Hospital is a 92 bed Base Hospital providing a range of acute specialist services including Emergency Medicine, General Medicine, General Surgery, Paediatric Medicine, Rehabilitation Medicine, ENT, Urology, Paediatric Surgery, Oncology, Obstetrics, Intensive Care, Respiratory Medicine and Rheumatology.

The North Coast Area Health Service

Coffs Harbour Health Campus

Pacific Highway, Coffs Harbour, 2450.
Tel: (02) 6656 7000, Fax: (02) 6656 7010

The new Coffs Harbour Health Campus was opened in November 2001 with capacity for 202 beds and a floor area of approximately 25,800 square metres. Services in the new facility are clustered around the needs of defined groups of patients and clients in four distinct Care Centres, namely the Family Care Centre, the Medical and Therapeutic Care Centre, the Critical and Surgical Care Centre, and the Mental and General Well-being Centre.

Port Macquarie Base Hospital

Wrights Road, Port Macquarie 2444
Tel: (02) 6581 2000, Fax: (02) 6580 1110

Port Macquarie Base Hospital was the first privately operated and owned hospital in Australia. This 161 bed hospital opened its doors to the public in November 1994 and is a comprehensive referral hospital for both public and private patients of Port Macquarie and surrounding areas. The hospital provides a 24 hour accident and emergency service; general surgery; orthopaedic surgery; vascular surgery; gynaecology; obstetrics; urology;

ear, nose and throat surgery; renal medicine; oncology; cardiology; thoracic medicine; general medicine; paediatric and neo-natal medicine; psychiatry and emergency medicine. The hospital has been accredited by the Medical Association/Colleges of Physicians, Surgeons, Obstetrics and Gynaecology, Orthopaedics and Psychiatry.

Kempsey District Hospital

River Street Kempsey. Tel: (02) 6652 6155, Fax: (02) 6563 1557
Kempsey Campus Coordinator – Dr Leo Smith – Tel: (02) 6562 6188.

This 106 bed acute general hospital provides emergency services, medicine, surgery, psychiatry, rehabilitation and obstetrics. **Durri Aboriginal Medical Service**, located in the Kempsey CBD, is a new state of the art facility providing primary health care for indigenous people.

Clinical Learning Environments (Private)

Prince of Wales Private Hospital

Barker Street, Randwick 2031
Tel: (02) 9650 4000 Fax: (02) 9650 4695

St. George Private Hospital

1 South Street, Kogarah 2217
Tel: (02) 9598 5555 Fax: (02) 9598 5000

St. Vincent's Private Hospital

406 Victoria Street, Darlinghurst 2010
Tel: (02) 8382 7111 Fax: (02) 8382 7234

Faculty Units, Centres and Affiliated Institutes

The Bioanalytical Mass Spectrometry Facility

The Bioanalytical Mass Spectrometry Facility (BMSF) is a UNSW beach-head facility providing research support to investigators on this campus and affiliated teaching hospitals. The BMSF is a major facility for molecular characterisation for the Faculties of Medicine, Science and Engineering at UNSW. The facility is equipped to world class standards enabling all types of mass spectrometry to help answer questions posed by researchers and clinicians. The BMSF is both a research and research-support facility engaged in several areas of study. There are three main overlapping areas of research: large molecule analysis including proteomics, small molecule biomarker research including the monitoring of damage, repair and the cellular changes associated with aging and inflammatory disease, and development of instrumentation and technology for mass spectrometry. The facility offers an analytical service and delivers courses on mass spectrometry and allied topics. The BMSF is in partnership with the Australian Proteome Analysis Facility (Macquarie University) which is funded under the Major National Research Facility Scheme. More information on the BMSF can be obtained at www.bmsf.unsw.edu.au

Centre for Health Informatics

The Centre for Health Informatics (CHI) engages in research, development and commercialisation of advanced information and communication technologies for health care delivery. Further information can be obtained at: www.chi.unsw.edu.au

The Centre conducts research and development in 4 broad areas:

- Evidence-based Decision Support - Developing technologies to provide on-line access to clinically relevant information to support decision making by clinicians and consumers.
- Clinical Communications - Understanding how communication fundamentally supports the process of health care delivery, its role in producing errors, and how new technologies can be used to improve communication.
- Home Telecare - uses information, communications, measurement and monitoring technologies to evaluate health status and deliver health care services to the home from a distance to improve clinical outcomes and allow the elderly and the chronically ill to stay at home longer.
- Evaluation - Assessing the effectiveness of new information and communication technologies in improving health outcomes and delivery.

Postgraduate courses in Health Informatics are offered within Masters degrees in the School of Public Health & Community Medicine.

Centre for Clinical Governance Research in Health

Since 1991, the Centre for Clinical Governance Research in Health has undertaken research and evaluation projects on health sector issues. Its

core interest is to investigate issues of policy, governance and leadership in the health sector. The Centre is involved in conducting original research into clinical governance issues, providing a scholarly capability by which to evaluate health sector policies, programs and projects, and contributing to undergraduate medical, postgraduate health services management, and public health and doctoral education. Further information is available at www.med.unsw.edu.au/clingov

Centre for Vascular Research

The Centre for Vascular Research is a multidisciplinary organisation focused on the causation and treatment of occlusive vascular disease and other pathologies with vascular components. This includes projects on angiogenesis in tumour growth and inflammation. The Centre has laboratories in the John Curtin School of Medical Research at the ANU and the Department of Biochemistry and Molecular Biology, Monash University in addition to UNSW on campus and at Prince of Wales Hospital and St George Clinical School. Details of the Centre, structure, group leaders, research directions and opportunities for undergraduate and postgraduate students are available at www.cvr.net.au

Children's Cancer Institute Australia for Medical Research

Children's Cancer Institute Australia for Medical Research is an independent institute affiliated with the Faculty of Medicine, UNSW. The Institute was established in 1976 and occupies a 5 storey complex at the southern end of the Sydney Children's Hospital as well as a number of labs and offices in a nearby building. With staff numbers exceeding 120, including Honours and postgraduate scholars of the University, the Institute undertakes laboratory research on malignant disease in children. Research work is organised into seven programs: experimental therapeutics, molecular diagnostics, molecular carcinogenesis, leukaemia biology, stem cell biology, iron metabolism and chelation and Australian Cancer Research Foundation Drug Discovery Program. The Institute is the only independent medical research institute in the country focusing solely on research into the nature, origin, cause and treatment of childhood cancers (particularly leukaemia and neuroblastoma).

Garvan Institute of Medical Research

The Garvan Institute of Medical Research has a staff of 280 including 45 PhD and MD scholars. The Institute is structured into six major research programs - arthritis and asthma, bone and mineral, cancer, neurobiology, metabolism and diabetes and pituitary disorders - which are funded through program and Project grants from the National Health and Medical Research Council. Located on the St Vincent's Hospital Campus, the Garvan Institute focuses on the molecular basis of health and disease, integrating a range of basic laboratory based research approaches together with extensive clinical research. Further information is available at www.garvan.org.au

National Centre in HIV Epidemiology and Clinical Research

The National Centre in HIV Epidemiology and Clinical Research (NCHECR) is recognised worldwide as a leader in HIV/AIDS research. The NCHECR undertakes research into HIV/AIDS that focuses on epidemiology, clinical research and clinical trials, in collaboration with other research centres, government departments, the pharmaceutical industry, community groups, health clinics and general practitioners. The priorities of the NCHECR include surveillance and monitoring of HIV infection and AIDS, epidemiological studies of transmission and disease progression, identification of social and behavioural factors affecting HIV disease and the establishment of Australia as a primary site for clinical trials of HIV therapy. As an extension of its role in HIV/AIDS, the Centre also carries out epidemiological and clinical research into other blood borne viruses, particularly Hepatitis C and sexually transmitted infections. Another significant area is the NCHECR's contribution to international clinical research and provision of research expertise and training to countries of the Asia-Pacific region. Recently the Centre has increased its role in the development and testing of novel vaccines for HIV. More information can be obtained from the Centre's website: www.med.unsw.edu.au/nchechr

National Perinatal Statistics Unit

The National Perinatal Statistics Unit (NPSU) is a collaborating unit of the Australian Institute of Health and Welfare based at the University of NSW. The NPSU is located on the Randwick Hospital Campus within the School of Women's and Children's Health. The NPSU maintains national perinatal and reproductive health data collections based upon

data supplied by the States and Territories. An assisted conception data collection is also held based upon data supplied by IVF and GIFT Units from Australia and New Zealand. The NPSU in collaboration with States and Territories and various professional, government, non government and consumer groups are involved in the continuing development of national reproductive and perinatal health data systems. The NPSU's objectives are to monitor and interpret national reproductive and perinatal health data, to conduct teaching and research in perinatal and reproductive health and research in perinatal and reproductive health.

National Drug and Alcohol Research Centre

The National Drug and Alcohol Research Centre (NDARC) was established at UNSW in May, 1986 and officially opened in November, 1987. It is funded by the Commonwealth Government as part of the National Drug Strategy (formerly, the National Campaign Against Drug Abuse). NDARC is situated on the UNSW Randwick campus in the eastern suburbs of Sydney. The centre is multidisciplinary and collaborates with medical, psychology, social science and other schools of the University, and with other institutions and individuals in Australia and overseas. The overall mission of NDARC is: by research and related activities to contribute to the minimisation of the harmful consequences of alcohol and other drugs used in Australia by increasing the effectiveness of the Australian treatment response to drug-related problems. Further information is available at <http://ndarc.med.unsw.edu.au>

Prince of Wales Medical Research Institute

The Prince of Wales Medical Research Institute is an independent institute affiliated with the University. Since its opening in 1993, it has grown to become one of the largest aggregates of research nationally on the functions and disorders of the brain and nervous system. It has a staff of more than 100. In 2003, it established the Mayne Clinical Research Imaging Centre based on a 3T machine. Major lines of research include human sensation and motor cortex function, balance and movement; autonomic nervous system; nervous system morphology (brain "atlases"); Alzheimer's, Parkinson's and other neuro-degenerative diseases; macular degeneration and blindness; clinical neurophysiology; nerve and spinal cord injury; child injury; chronic pain; and role of steroids in maintaining or altering functions of the nervous system. For further information visit the Institute's website at: www.powmri.edu.au

Simpson Centre for Health Services Research

The Simpson Centre is a NSW Government funded Research Centre with a strong history of applied research and health service innovation. The genesis of the Simpson Centre was in response to increasing pressure for practical solutions to improve acute services. This has now expanded to include research across traditional boundaries linking acute medical and community based health care delivery. The principal objectives of the Simpson Centre are to: innovate, evaluate research and develop health service systems; disseminate research results and facilitate implementation of validated service innovation. This approach also incorporates examination of cultural and psychosocial factors influencing service delivery and utilisation.

Skin and Cancer Foundation Australia

The Skin and Cancer Foundation was established in 1978 and is affiliated with St. Vincent's Hospital. A broad range of clinics is devoted to the diagnosis and treatment of skin cancer, psoriasis, contact dermatitis, vitiligo and pigmented skin lesions. There is a large dermatopathology service. Clinical trials as well as research in occupational dermatoses and histopathology are pursued. The Foundation provides sunscreen testing and irritancy testing for new products.

The Foundation has a Westmead branch which provides sunscreen testing and irritancy testing for new products as well as being the main centre for dermatological surgery.

Victor Chang Cardiac Research Institute

The VCCRI was established in 1994 to honour the vision and memory of the late Dr Victor Chang. It is a member of the St Vincent's Hospital Campus. It aims to conduct the highest quality fundamental research into cardiovascular diseases, with a major emphasis on the prevention, diagnosis and treatment of heart muscle diseases. It currently has active research programs in molecular cardiology relating to the mechanisms of cardiac hypertrophy and signal transduction; developmental biology, gene regulation and enzyme research; the genetics of cardiovascular diseases; cardiac arrhythmias and mechanics; transplantation biology; vascular bioengineering, and the pathophysiology of cardiac ischaemia and coronary stenosis.

Rural Health Unit

The Rural Health Unit was established in 1995 to help address the chronic shortage of doctors in rural areas. Since this time the Unit has seen a rapid growth in personnel and student activities.

The principal areas of responsibility of the Rural Health Unit are:

- administration of special entry schemes, such as the Rural Students Entry Scheme (RSES);
- promoting Medicine and allied health to rural high school students;
- administration and support of RAHMS, the Rural Allied Health & Medical Society;
- supporting rural students in Medicine;
- encouraging and supporting students who are interested in pursuing a career in rural health;
- promoting rural health through various avenues, eg. the media and lobbying to the government; scholarships, cadetships, bursaries;
- promoting rural health as a viable alternative to urban based medical practice;
- providing a forum for communication between metropolitan and rural health professionals, eg. workshops;
- conducting research into rural health issues and rural curriculum in the Medicine program; and
- supporting current students of the School of Rural Health and promoting the School to pre-clinical UNSW based students which will increase the opportunities for rural clinical learning.

For more information please visit the Rural Health Unit website <http://rural.med.unsw.edu.au>

Indigenous Health Unit

The Indigenous Health Unit works in close collaboration with the Rural Health Unit to:

- promote Medicine to school-age and mature Indigenous students;
- administer the Indigenous Entry into Medicine scheme, including the Pre-Medicine program, a preparation to the medical course;
- select students;
- support students throughout their course;
- develop appropriate curricula (in consultation with Indigenous communities);
- develop partnerships with Indigenous communities;
- coordinate teaching in Indigenous Health to all students within Medicine;
- conduct research into Indigenous Health and assist in building the capacity of others to undertake such research.

Program Rules and Information

The Faculty of Medicine introduced an innovative six year undergraduate Medicine program (3802 New Medicine program) that commenced for Year 1 students in 2004. Information below is provided both for this new program and for the existing 3801 Medicine program.

3802 Medicine Program

Bachelor of Medicine Bachelor of Surgery MB BS

Typical Duration
6 years

Minimum UOC for Award
288 units of credit

Typical UOC per Session
24 units of credit

Program Description

This six-year program leads to the award of the degrees Bachelor of Medicine and Bachelor of Surgery - MB BS. This double degree, which is in effect a single degree, may be awarded with Honours Class 1; Honours Class 2, Division I; Honours Class 2, Division II; or at Pass level. The award of Honours is determined on the basis of a student's performance throughout the six year program, obtained by using the weighted mark for specified assessments in the three phases of the program.

Students who have achieved a high standard in their studies may undertake a one year program of supervised research leading to the award of the BSc(Med) Honours. For details, please refer to the program entry for 3831 Bachelor of Science (Medicine) Honours.

Program Objectives and Learning Outcomes

The objectives of the medicine program are:

- to establish an integrated, interconnected and organised medical knowledge base as a platform for a professional and personal life of learning through experience;
- to develop effective interactions with oneself through reflection; interaction with others through communication; and interaction with information and learning resources through information literacy and critical analysis;
- to develop a set of personal attributes and skills appropriate to the professional practice of Medicine.

These objectives have been translated into a set of educational outcomes; these being eight desired capabilities in graduates of the Medicine program, grouped as follows:

Applied Knowledge and Skills

1. Using basic and clinical sciences in medical practice
2. Understanding the social determinants of health and disease
3. Patient assessment and management

Interactional Abilities

4. Effective communication
5. Working as a member of a team

Personal Attributes

6. Self directed learning and critical evaluation skills
7. Understanding and acting in an ethical and socially responsible manner
8. Development as a reflective practitioner

Program Structure

The duration of the Medicine program is normally 6 years. It has a modular structure comprising a series of fully integrated courses studied over 27 teaching periods, each of 8 weeks duration. There are 4 teaching periods in Years 1-3 (Teaching Periods 1-4). There are five teaching periods (Summer Teaching Period and Teaching Periods 1-4) in years 4-6. The commencement dates of Teaching Periods 1 and 3 correspond to the beginning dates of the standard UNSW Sessions 1 and 2 respectively, and the Summer Teaching Period generally commences on the first Monday in January. Teaching is integrated across discipline areas. Courses usually correspond to an 8-week module, rather than the sessional arrangement applicable to most UNSW courses. However, in general the standard UNSW program load of 48 units of credit (UOC) per year will apply, with most 8-week courses being treated as 10 UOC.

As part of the program, students are required to satisfy the University's General Education requirements. Please see General Education below.

The program is organised into three phases. **Phase 1** includes an initial Foundations course, followed by 8 x 8 week courses focussing on basic medical sciences in relation to the human life cycle; social, ethical and legal issues related to health care; and early experience in clinical or other health-related environments. During this phase, students will undertake a variety of learning activities involving students from different stages of the program working collaboratively in small groups.

Phase 2 consists of a minimum of 4 x 8-week courses, with increased clinical content and an emphasis on correlation between prior and current learning.

Phase 3 consists of a minimum of 9 x 8-week courses with a clinical focus, but still includes relevant content from the basic medical sciences and the social sciences. The sequence of courses in Phase 1 is fixed, but in later phases students will have increasing flexibility to tailor the sequence and content of the courses they undertake to match their interests and needs.

In all phases of the program, students will be required to travel to various clinical environments associated with UNSW, which will be the predominant locations for learning in Phases 2 and 3. These locations include Clinical Schools associated with St Vincent's Hospital, Darlinghurst; St George Hospital, Kogarah; the Randwick Campus Hospitals, various locations in the South Western Sydney Clinical School based around Liverpool; and the School of Rural Health, which has campuses in the

Greater Murray and Mid-North coast areas. Throughout the program, students may be attached to multiple sites, which will typically include at least 8 weeks in a non-metropolitan setting.

After completing Phase 1, and typically in Phase 2, students will undertake an Independent Learning Project, equivalent to 3 courses, which unless otherwise negotiated, will be taken consecutively over 4 teaching periods, during which students should also complete 12 UOC of elective courses in a faculty or faculties other than Medicine. This project will offer scope for in-depth study in a variety of possible settings, ranging from laboratory-based work in the biomedical sciences, audits of clinical practice, to - for example - projects dealing with cross-cultural issues or health economics, which may be taken outside the Faculty of Medicine.

Students wishing to undertake a full year of research will be able to enrol in the BSc (Med) Honours program 3831. These students will be exempt from undertaking the Independent Learning Project and will thus complete the combined program over 28 teaching periods in approximately 6.5 years. Exemption from the Independent Learning Project will also be granted to students who have previously completed a research Honours program or higher research degree, or a Master degree with a significant research component, or who can otherwise demonstrate acceptable evidence of independent study or research at a tertiary level. These students will complete the Medicine program over 24 teaching periods.

PHASE 1

MFAC1501	Foundations	(12 UOC)
MFAC1502	Society & Health 1	(12 UOC)
MFAC1503	Beginnings, Growth & Development 1	(12 UOC)
MFAC1504	Health Maintenance 1	(12 UOC)
MFAC1505	Ageing and Endings 1	(12 UOC)
MFAC1506	Society and Health 2	(10 UOC)
MFAC1507	Beginnings, Growth and Development 2	(10 UOC)
MFAC1508	Health Maintenance 2	(10 UOC)
MFAC1509	Ageing and Endings 2	(10 UOC)

and

MFAC1511	Phase 1 Portfolio Examination	
MFAC1512	Phase 1 End-of-Phase Assessment	
MFAC1513	Phase 1 Clinical and Communications Skills Examination	

PHASE 2

MFAC2501	Society and Health 3	(10 UOC)
MFAC2502	Beginnings, Growth and Development 3	(10 UOC)
MFAC2503	Health Maintenance 3	(10 UOC)
MFAC2504	Ageing and Endings 3	(10 UOC)

and

MFAC2511	Phase 2 Portfolio Examination	
MFAC2512	Phase 2 Integrated Clinical Assessment	

PHASE 2 OR 3

MFAC4501	Independent Learning Project 1	(8 UOC)
MFAC4502	Independent Learning Project 2	(8 UOC)
MFAC4503	Independent Learning Project 3	(8 UOC)

PHASE 3

MFAC3501	Clinical Module 1	(10 UOC)
MFAC3502	Clinical Module 2	(10 UOC)
MFAC3503	Clinical Module 3	(10 UOC)
MFAC3504	Clinical Module 4	(10 UOC)
MFAC3505	Clinical Module 5	(10 UOC)
MFAC3506	Clinical Module 6	(10 UOC)
MFAC3508	Clinical Module 8	(10 UOC)
MFAC3509	Clinical Module 9	(10 UOC)
MFAC3510	Clinical Module 10	(10 UOC)

and

MFAC3511	Phase 3 Portfolio Examination	
MFAC3512	Phase 3 Integrated Clinical Examination	
MFAC3513	Phase 3 Clinical and Correlation Assessment Parts A and B	

General Education Requirements

As part of the program, students are required to complete 12 UOC of General Education courses (unless exempt under UNSW rules) which may be available as sessional courses or in block mode. Students are also required to undertake 12 UOC of elective courses in a faculty or faculties other than Medicine.

For information on available courses, please refer to the General Education section in this Handbook.

Honours

Award of Honours

This will be calculated on the basis of a weighted mark for specified assessments in the three phases of the program, together with the marks obtained in General Education courses and courses undertaken outside the Faculty of Medicine.

Please note: To be eligible for Honours, students must achieve a grade of Credit or better in the Independent Learning Project, unless they have been exempt from undertaking the project.

The Faculty Assessment Review Group considers the ranked list of students and their marks and decides the cut-off marks for the award of Honours at the various levels. Neither the percentage of the students obtaining Honours at the various levels nor the cut-off marks are predetermined, and the Faculty Assessment Review Group makes its own assessment of the level of academic attainment indicated by the overall program mark.

Relative Weighting Within Phases

Phase 1

End-of-Block Examinations (cumulative) 2
End-of-Phase Examination 1
Portfolio Assessment 2
Clinical & Communication Skills Examination 1

Phase 2

Clinical Examination 3
Portfolio Assessment 3
Project Marks (best 4 if more than 4) 2

Phase 3

Clinical Module Assessments (best 8) 1
Portfolio Assessment 1
Clinical and Correlation Examination 2

Relative Weighting of Phases and Other Components

Phase 1 = 6
Phase 2 = 4
Phase 3 = 8
General Education courses = 1
Additional courses from other Faculties = 1

Academic Rules

Rules of Progression

Assessment in this program is capability based, requiring students to demonstrate their ongoing development with respect to the eight areas of capability. Progression will not be based solely on satisfactory completion of individual courses, nor will it correspond solely to annual stages. Full details are available on the Faculty of Medicine website.

3841 Combined Arts and Medicine Program

Bachelor of Arts Bachelor of Medicine Bachelor of Surgery

BA MB BS

Typical Duration

7 years

Minimum UOC for Award

336 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Arts/Medicine program is an alternative program of study in which, over a seven-year period, a student may complete the degree of Bachelor of Arts, together with the degrees of Bachelor of Medicine and Bachelor of Surgery. A limited number of places is available in this program and these are open only to students who have been accepted for entry into the Faculty of Medicine.

Students who wish to undertake the program should contact the Office of the Dean as soon as possible after receiving their offer of a place in the Medicine Program. Selection of students for the Arts/Medicine program is made approximately two weeks before commencement of Session 1, although students may apply to transfer from the Medicine 3802 program to Arts/Medicine 3841 at the end of Year 1.

Program Objectives and Learning Outcomes

The Arts/Medicine program is intended for those students who wish to continue their interest and studies in the Arts and Social Sciences during their medical studies.

For the Program Objectives of the MBBS component of the Arts/Medicine program, please refer to the program entry for 3802 Medicine in this Handbook.

Program Structure

Over a period of seven years, students will be required to fulfil the requirements of the MB BS degree program as well as 66 units of credit in courses offered by the schools/departments/programs within the Faculty of Arts & Social Sciences, including an approved major sequence. A major sequence equals 42 units of credit (usually 12 at Level 1 and 30 at upper level).

For the Program Structure of the MB BS component of the Arts/Medicine program, please refer to the program entry for 3802 Medicine program.

Honours

Students who have completed the combined Arts/Medicine program are eligible for the award of Honours in the MB BS degree program, based on the weighted mark for specified assessments in the three phases of the MB BS program, together with the marks obtained in the best 24 UOC undertaken in the Faculty of Arts & Social Sciences.

Relative Weighting of Phases and other Components

Phase 1 = 6
Phase 2 = 4
Phase 3 = 8
Arts Courses (best 24 UOC) = 2

For further details on Honours, please refer to the program entry for 3802 Medicine program.

Academic Rules

Students in the BA MB BS program will not be required to complete General Education courses or other courses outside the Faculty of Medicine. They will usually complete the requirements for the BA after 4 years. Upon rejoining the Medicine program, they will undertake a short clinical skills refresher course. Students wishing to undertake a full year of research in Arts will be able to enrol in a BA Honours program. Subject to the sequence of courses taken during Phase 2, these students may be exempt from undertaking the Independent Learning Project and could complete the combined program in approximately 7.5 years.

For academic rules and requirements relating to the MB BS component of the Arts/Medicine program, please refer to the program entry for 3802 Medicine in this Handbook.

3801 Medicine Program – for continuing students only

**Bachelor of Science (Medicine) Bachelor of Medicine
Bachelor of Surgery
BSc(Med) MB BS**

Please note: This program is not available to commencing students. Details below are provided for the reference of continuing students only. Prospective students should refer instead to the new Medicine program 3802.

Typical Duration

6 years

Minimum UOC for Award

288 units of credit

Typical UOC per Session

24 units of credit

Program Description

This six-year program leads to the award of the degrees of Bachelor of Science (Medicine), Bachelor of Medicine, Bachelor of Surgery - BSc (Med) MB BS.

These degrees, which are in effect a single degree, may be awarded with Honours Class 1; Honours Class II, Division I; Honours Class II, Division II or at Pass level. The award of honours is determined on the basis of a student's performance throughout the six year program, and is usually obtained by using the weighted average mark for each year, calculated by weighting the courses according to units of credit.

On completion of Year 3 of the six-year program, students also qualify for the degree of Bachelor of Science (Medicine). Students would not ordinarily be awarded the BSc(Med) until the completion of the requirements for the award of the MB BS. However, students who have completed the requirements for the award of the BSc(Med) and are leaving the Medicine Program 3801 (BSc(Med) MB BS), either through their own decision to withdraw or upon exclusion by the University, are eligible to be awarded the BSc(Med) degree at that stage.

Students who have achieved a high standard in their studies may undertake an additional one year program of supervised research leading to the award of the BSc(Med) Honours. For details, please refer to the program description for 3831 BSc(Med) Honours.

Program Objectives and Learning Outcomes

The objectives of the Medicine program are:

1. To produce a graduate with knowledge of medical and behavioural sciences sufficient to understand the scientific basis of medicine and to go forward with medicine as it develops further.
2. To provide a graduate with the flexibility of outlook and training necessary to progress to any field of endeavour in medicine or related disciplines.
3. To provide education in clinical methods and patient care in the main branches of medicine and surgery so that the graduate could undertake patient care under supervision at the level of an intern.
4. To help the graduates understand professional and ethical principles and to be at all times mindful of the individual's obligations to patients, colleagues and the community.

Program Structure

Year 1

Year 1 is not being offered in 2006

Year 2

Year 2 is not being offered in 2006

Year 3

Year 3 is not being offered in 2006

Year 4

Year 4 of the program is primarily based in the teaching hospitals and comprises 6 terms totalling 39 weeks. Of these weeks, 36 will be spent in hospitals and 3 will be spent on campus. For their time in hospitals, students will work as part of a health-care delivery team. The students' responsibilities as part of that team will be increased gradually as new skills are acquired. The philosophy inherent in education by attachment to a hospital team is important. Learning 'on the job' exposes students to real clinical situations incorporating both the medical and social implications of disease and allows the continued development of counselling skills. Thus, students will learn that hospital care should be linked to continuing care in the community, and that there is much emphasis in modern medicine on rehabilitation to maximise patients' chances of resuming their normal role in society. Reading about pathological processes, combined with team discussion of problem patients, provides the ideal environment for the retention of new knowledge.

The teaching of Population Health and Community Medicine is integrated with clinical studies in the teaching hospitals and is a part of the campus teaching program.

The Pathology course comprises a component of didactic teaching within the framework of the common campus program and a major hospital-based component taught through a tutorial program.

The course of Clinical Pharmacology (Therapeutics) is introduced during the common campus program and reinforced during discussions of patient management as part of student attachments to clinical units.

At the commencement of fourth year, each student will receive a syllabus containing details of the integrated program for Clinical Studies, Pathology, Clinical Pharmacology and Population Health and Community Medicine.

Rules of Progression

Students will be required to pass each of four separate segments of the assessment, namely: a pass in the Population Health and Community Medicine continuous assessment, a pass in the Pathology viva and project report (as a combined mark), a pass in a Short Case clinical examination, and a pass in the combined written papers.

Students who have not completed the General Education components of the Medicine program and who otherwise are eligible to progress to Year 5 are not allowed to progress until they have satisfied such requirements.

The medicine course in Year 4 is conducted over both sessions. The UOC indicated below is for a single session only.

MDSG4001 Integrated Clinical and Community Studies (24 UOC)

Preparation for Year 6 Elective Term

Arrangements for Elective attachments in Year 6 must be made by the students. Students should commence these arrangements in Year 4, especially those wishing to undertake attachments overseas. See course description for MFAC6001 under Year 6, below.

Year 5

Year 5 in 2006 is comprised of five teaching periods, each of eight weeks. (In 2008 and beyond, the Elective will be undertaken in Year 6.) In the first four Teaching Periods students rotate through blocks of teaching in obstetrics and gynaecology, paediatrics, psychiatry, geriatrics, general practice and subspecialties, rather than studying the courses concurrently. For this purpose students are allocated to a particular group (A, B, C, or D) and will follow the program of that group for the year.

The courses studied in Year 5 are:

MFAC5001	Geriatrics/General Practice/Subspecialties	(10 UOC)
OBST5001	Obstetrics and Gynaecology	(10 UOC)
PAED5101	Paediatrics	(10 UOC)
PSYM5001	Psychiatry	(10 UOC)
MFAC5003	Elective	(8 UOC)

Assessment and Rules of Progression

The work of each rotating block is assessed during or towards the end of the block. Students will be required to pass all five courses before progressing to Year 6. Course examiners may, in the time between the sitting of term assessments and the meeting of the Assessment Committee, require students to undertake further assessment. A student who fails one term may be required to repeat that term in a six week remedial period following Term 5:4. Students are warned that they may be required to undertake such additional assessment and should take this into account if making travel arrangements for the period after the end of Term 5:4. A student who fails two terms or more will be required to repeat all Year 5 courses.

Sequence of Blocks - Group A

Summer Teaching Period: (8 weeks) Paediatrics
Teaching Period 1 (8 weeks) Obstetrics and Gynaecology
Teaching Period 2 (8 weeks) Psychiatry
Teaching Period 3 (8 weeks) Geriatrics/General Practice/Subspecialties
Teaching Period 4 (8 weeks) Elective

Sequence of Blocks - Group B

Summer Teaching Period (8 weeks) Obstetrics and Gynaecology
Teaching Period 1 (8 weeks) Paediatrics
Teaching Period 2 (8 weeks) Geriatrics/General Practice/Subspecialties
Teaching Period 3 (8 weeks) Psychiatry
Teaching Period 4 (8 weeks) Elective

Sequence of Blocks - Group C

Summer Teaching Period (8 weeks) Psychiatry
Teaching Period 1 (8 weeks) Geriatrics/General Practice/Subspecialties
Teaching Period 2 (8 weeks) Paediatrics
Teaching Period 3 (8 weeks) Obstetrics and Gynaecology
Teaching Period 4 (8 weeks) Elective

Sequence of Blocks - Group D

Summer Teaching Period (8 weeks) Geriatrics/General Practice/Subspecialties
Teaching Period 1 (8 weeks) Psychiatry
Teaching Period 2 (8 weeks) Obstetrics and Gynaecology
Teaching Period 3 (8 weeks) Paediatrics
Teaching Period 4 (8 weeks) Elective

Year 6

The first term for Year 6 in 2006 is an Elective term (MFAC6001) of 8 weeks. The remaining five terms totaling 32 weeks are devoted to the course Integrated Clinical Studies 6 (MDSG6001) of which 30 weeks is based in the Teaching Hospitals and 2 weeks will be spent on campus.

MDSG6001 is conducted over both sessions. The UOC indicated below for this course is for a single session only.

MDSG6001	Integrated Clinical Studies 6	(22 UOC)
MFAC6001	Final Year Elective Term	(4 UOC)

Academic Rules

Supplementary Assessment

Details of assessment requirements are contained in the sections on particular years and courses in the program. The following regulations

relate to supplementary assessment, which apply to all years of the Medicine program.

Course examiners may, in the time between the sitting of an assessment and the meeting of the Assessment Committee, require students to present themselves for further assessment to resolve any doubts as to a student's performance. After the Assessment Committee meets further assessment may be given to allow the Assessment Committee to resolve a doubt. In Years 4 and 6 such additional assessment is usually undertaken in December. Such further assessment may be given when students, through illness or some other acceptable circumstances, have been prevented from taking one or more of the assessments or have been disadvantaged during the assessment.

In Year 5, course examiners may, in the time between the sitting of term assessments and the meeting of the Assessment Committee, require students to undertake further assessment. A student who fails one term may be required to repeat that term in a six week remedial period following Term 5:4. Students are warned that they may be required to undertake such additional assessment and should take this into account if making travel arrangements for the period after the end of Term 5:4.

Further assessment may not be granted when the composite mark accurately reflects failure to achieve the required standard of knowledge and understanding of the course.

3840 Combined Arts and Medicine Program – for continuing students only

**Bachelor of Arts Bachelor of Science (Medicine)
Bachelor of Medicine Bachelor of Surgery
BA BSc(Med) MB BS**

Please note: This program is not available to commencing students. Details below are provided for the reference of continuing students only. Prospective students should refer instead to the new Medicine program 3841.

Typical Duration
7 years

Minimum UOC for Award
336 units of credit

Typical UOC per Session
24 units of credit

Program Description

The Arts/Medicine program is an alternative program of study, in which, over a seven-year program a student may complete the degree of Bachelor of Arts, with the degrees Bachelor of Science(Medicine), Bachelor of Medicine and Bachelor of Surgery. The Arts/Medicine program is intended for those students who wish to continue their interest and studies in the Arts during their medical studies.

Over a period of seven years, students will be required to fulfil the requirements of the BSc(Med) MB BS degree program as well as 60 units of credit in courses offered by the Schools/Departments/Programs within the Faculty of Arts (including an approved major sequence).

Students who have completed the combined Arts/Medicine degree program are eligible for the award of Honours in the BSc(Med) MB BS degree program, based on weighted performance in courses (excluding those courses not in the normal Medicine program) throughout the combined program. The award of Honours shall be determined on the basis of a weighted aggregate mark, calculated as the sum of weighted aggregate marks obtained in the medical component of the program in accordance with the rules applying to the Medicine program 3801.

Program Objectives and Learning Outcomes

Program objectives are addressed under the entry for the Medicine program 3801.

Program Structure

Students are required to undertake all BSc(Med) MB BS courses plus 60 units of credit from the Faculty of Arts (including a major sequence) during Years 1 to 3. A major sequence equals 42 units of credit (usually 12 at Level 1 and 30 at upper level).

For details of available Faculty of Arts specialisations and courses, please refer to the entry for the Bachelor of Arts program 3400.

Program Structure

Year 1

Year 1 is not being offered in 2006.

Year 2

Year 2 is not being offered in 2006.

Year 3

Year 3 is not being offered in 2006

Year 4

Upper Level Arts major sequence plus additional Arts courses (48 UOC)

Year 5

Students join Year 4 of the Medicine program.

Honours

Ranking for the Award of Honours (Program Codes 3801, 3821 and 3840)

Students are ranked on the basis of their performance throughout the undergraduate Medicine program. An overall program mark is calculated for each student using the following procedure:

1. A weighted average mark for each year of the program is determined. This year mark is obtained by weighting each of the courses in the year, according to the units of credit. The course weights for each of the years of the program are shown in Table 1 below.
2. The overall program mark is determined by applying the year weightings listed in Table 2 to the weighted year marks.
3. If a student were required to sit for a supplementary assessment (other than for medical reasons or other exceptional circumstances) the course mark used is that awarded for the original assessment.
4. If a student were required to repeat a year (other than for medical reasons or other exceptional circumstances), the weighted year mark used is that obtained at the first attempt.
5. In the calculation of the average weighted program mark for BSc MB BS students, the aggregate mark for the Science component is calculated as a weighted aggregate of all courses counted towards the Science degree. The course weights are as follows:

Level I courses weighted by a factor equal to 0.0625 per course, except General Mathematics, Fundamental of Physics and Life Science Physics (0.05 per course) and Higher Chemistry and Higher Mathematics (0.07 per course).

Level II courses weighted by 0.1875 per course.

Level III courses weighted by 0.25 per course.

Level IV courses (Honours) not counted.

The three years of BSc component of the BSc MB BS program are treated as equivalent to the first two years of the MB BS program and therefore have a total year weight of 6 relative to the MB BS year weightings.

There is a limit set of 50 for the best possible score in the first year of the BSc component to put all students, whether or not they undertake Higher Mathematics or Physics, on the same footing. Only the best 144 units of credit in the BSc component are considered in calculating the ranked score.

6. Honours calculation for students undertaking the BA BSc(Med) MB BS program is the same as for the BSc(Med) MB BS program, i.e. the courses in the BA component are not counted.
7. Provision is made for students admitted with advanced standing and/or exemptions in certain courses not to be penalised in the calculation of rankings.

Award of Honours

1. The Faculty Year 6 Assessment Review Group considers the ranked list of students and their marks and decides the cut-off marks for the award of Honours at the various levels.
2. Neither the percentage of the students obtaining Honours at the various levels nor the cut-off marks are predetermined, and the Committee makes its own assessment of the level of academic attainment indicated by the overall program mark.
3. As a guide, the distribution of the awards of Honours in 2004 was:

Class I Honours

Program Mark: 72.49% – 80.33%

Number of Awards: 21

Percent of graduands: 11.5%

Class II Div. I

Program Mark: 68.84% – 72.37%

Number of Awards: 29

Percent of graduands: 15.8%

Class II Div. II

Program Mark: 66.33% - 68.70%

Number of Awards: 23

Percent of graduands: 12.6%

Table 1: Course Weights Within Years (Six Year Program)

Year 1	
Anatomy	12
Introductory Clinical and Behavioural Studies	8
Biology for Medical Students	4
Biochemistry for Medical Students	12
Year 2	
Medical Biochemistry and Genetics	8
Anatomy 2	14
Medical Physiology 1	16
Human Behaviour	6
Year 3	
Microbiology for Medical Students	8
Pathology	10
Medical Physiology 2	8
Medical Pharmacology	10
Clinical Studies 3	8
Medical Ethics and Health Law	4
Year 4	
Integrated Clinical and Community Studies	48
Year 5	
Obstetrics & Gynaecology	12
Paediatrics	12
Psychiatry	12
Geriatrics/General Practice/Subspecialties	12
Year 6	
Integrated Clinical Studies 6	44

Table 2: Year Weights

Year	Weighting
Year 1	2
Year 2	4
Year 3	4
Year 4	6
Year 5	4
Year 6	6

Academic Rules

Please consult Faculty or refer to the printed Handbook relevant to your year of commencement of study.

3831 Bachelor of Science (Medicine) Honours

BSc(Med)Hons

Typical Duration

1 year

Minimum UOC for Award

48 units of credit

Typical UOC per Session

24 units of credit

Program Description

This is a one-year research program offered to students in the six-year Medicine program who have achieved a high standard in their studies. Those who complete the research program in conjunction with the six-year curriculum, will be eligible for the award of the degree BSc(Med)Hons.

Program Objectives and Learning Outcomes

In general the aims of the year, normally spent in supervised research, are to enable the student to acquire an appreciation of the value of observation and research in the development of medical science, to determine the 'current state of knowledge' in a defined field, to provide experience in the written and spoken presentation of scientific information and scholarly research, and to provide an invaluable background in basic research philosophy and techniques on which a subsequent career in specialised medical research may be built. This year enables the student to gain experience in the written and spoken presentation of scientific information

Program Structure

Information concerning this program option is issued to medical students mid-year. A list of available research projects may be obtained from the Office of the Dean.

Academic Rules

For candidates in the programs 3801, 3802, 3840 and 3841

1.(a) Undergraduates who have successfully completed at least the first three years of the six-year Medicine programs 3801 or 3802, or at least the first four years of the seven-year Arts/Medicine programs 3840 or 3841 may enrol for the degree of BSc(Med)Hons in one of the following programs: Anatomy, Biochemistry, Microbiology, Pathology, Pharmacology, Physiology, Psychology or in any other program approved by the BSc(Med)Hons Committee provided that the candidate's performance in the area subject has been of a high standard.

(b) A student may register as a candidate for the degree in any of the Schools of the Faculty of Medicine, the School of Biochemistry, the School of Microbiology or the School of Psychology, subject to the permission of the Head of the School concerned and the BSc(Med)Hons Committee.

2.(a) Medical graduates may enrol for the degree of BSc(Med)Hons in any course approved by the BSc(Med)Hons Committee provided that their performance in the subject area has been of a high standard.

(b) A graduate may be registered as a candidate for the degree in any of the Schools of the Faculty of Medicine, the School of Biochemistry, the School of Microbiology or the School of Psychology, subject to the permission of the Head of School concerned and the BSc(Med)Hons Committee.

3. The program for each candidate shall be designed to introduce the student to research in the appropriate discipline and shall consist of such formal and special work and any examinations prescribed by the BSc(Med)Hons Committee.

Enrolment/Progression

1. The Faculty Administrative Officer will arrange the transfer of enrolment after the BSc(Med)Hons Committee has approved the application.

2. Students will be formally reviewed by members of the Committee twice per year. A mid-year verbal report and discussion will take place between the student, supervisors and Committee covering progress in meeting the aims of the research project and any problems encountered by the student and supervisors.

Assessment Guidelines

1. The BSc(Med)Hons Committee determines the assessments for the program on the advice of the supervisors and two assessors who are external to the supervisor and at least one being external to the School of enrolment.

2. The compulsory components of the assessment include a thesis, an essay or literature review, two seminar presentations and a supervisors' report.

3. Candidates must take part in the activities of the program by participating in seminars, by presenting of essays or literature reviews and other prescribed activities.

4. A thesis is compulsory and forms a major part of the assessment. The thesis must be typed and suitable for subsequent binding if required. The typescript length of the thesis is normally no more than 20,000 words.

5. Candidates are required to present their research projects in the two seminar presentations organised by the BSc(Med)Hons Committee. For students studying overseas, a computer-generated presentation will be requested in lieu of the mid-year seminar and the members of the Committee will have the right to ask questions of the student by phone or email after viewing the presentation.

6. It is desirable that candidates take part in the activities of the school by participation in seminars and other prescribed activities.

7. The degree of BSc(Med)Hons may be awarded in the following grades: Honours Class I; Honours Class II, Division I; Honours Class II, Division II or no award made.

3850 Bachelor of Science in Health and Sports Science

BSc

Please note: This program is not available to commencing students. Details below are provided for the reference of continuing students only. Prospective students should refer instead to the new program 3870.

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Authority

Dr Steve Boutcher

Dept Physiology and Pharmacology

Tel: (02) 9385 2877

Email: s.boutcher@unsw.edu.au

Program Officer

Nicole Graham

Tel: (02) 9385 2547

Email: n.graham@unsw.edu.au

Program Description

The program offers a comprehensive education in the area of health and exercise with a focus on the use of physical activity as preventative and rehabilitative therapy. Students can choose to specialise in one of three areas of focus: cardiac, musculoskeletal, or neuromuscular rehabilitation. Four years of full-time study, or the part-time equivalent, leads to the award of a Bachelor of Science (in Health and Exercise Science). The Faculty Assessment Review group may award Honours to students who perform throughout the program with merit. The level of performance required for such award will be determined by the Assessment Review Group. Part-time students undertake a reduced program subject to the availability of courses. A total of 192 units of credit must be successfully completed for the award of this degree. Graduates may expect to find employment in sports medicine clinics, rehabilitation clinics and hospitals, Commonwealth, State and Local Government departments, sports academies and institutes, professional organisations, sporting associations, universities, corporate health, private practice, and gymnasiums and fitness centres. In addition it is expected that graduates become members of the professional body the Australian Association of Exercise and Sports Science.

Program Objectives and Learning Outcomes

The degree is committed to excellence in teaching in the exercise sciences and in exercise clinical training. The degree is designed to enable students to:

- develop a thorough understanding of the relationship between physical activity and health
- develop a broad range of communication skills and an ability to work as a member and a leader of a team
- develop advanced problem solving skills and a capacity for critical thinking
- attain competencies in conducting a broad range of exercise-based clinical tests
- attain skills and detailed clinical knowledge relevant to cardiac, musculoskeletal, or neuromuscular rehabilitation

Program Structure

Stage 1 introduces students to the core science that will serve as a foundation for the following years. Courses include anatomy, histology, chemistry, biology, and psychology. Students will be introduced to the exercise area through three courses: exercise science, lifestyle and health and exercise behavioural science. Stage 2 of the program begins to focus on human physiology, pathology, biochemistry, functional anatomy and exercise physiology while building on the scientific principles acquired in Stage 1. Stage 3 of this multidisciplinary program moves the student towards an integrated understanding of health and exercise and includes courses such as advanced exercise physiology, exercise and health, biomechanics, motor control, cardiac rehabilitation, special populations and clinical movement studies. Stage 4 continues to develop multi-disciplinary expertise through use of specialized courses and a wide range of electives. Electives include courses in clinical exercise physiology, movement rehabilitation, neuromuscular rehabilitation, nutrients and exercise, musculoskeletal diseases and professional practice. Extensive industry experience is a key component of this final year with students participating in practicums in the University's Healthy Lifestyle Clinic and external (including hospital) placements. Understanding of scientific method is an important component of this program and all students will take a research methods course in Stage 4. Courses offer a mixture of traditional and interactive/case study approaches to learning. General Education is a requirement of all undergraduate courses at this university and can be taken in Stages 2 and 3.

Stage 1 – not being offered in 2006

Stage 2**Session One**

ANAT3131	Functional Anatomy 1	(6 UOC)
BIOC2181	Fundamentals of Biochemistry	(6 UOC)
PHPH2501	Physiology for Health and Sports Science A	(6 UOC)
General Education courses		(6 UOC)

Session Two

ANAT3141	Functional Anatomy 2	(6 UOC)
PATH2201	Processes in Disease	(6 UOC)
PHPH2502	Physiology for Health and Sports Science B	(6 UOC)
PHPH2503	Exercise Physiology	(6 UOC)

Stage 3**Session One**

General Education courses	(6 UOC)

Plus a further 6 credit points from:

PHPH3211	Cardiorespiratory and Exercise Physiology	(6 UOC)
PHPH3502	Skeletal Muscle in Health and Exercise	(6 UOC)

Session Two

FOOD3330	Nutrition for Sports Science	(6 UOC)

Plus a further 6 credit points from:

BIOC2291	Fundamentals of Molecular Biology	(6 UOC)
PATH3207	Musculoskeletal Diseases	(6 UOC)
PHPH3131	Neurophysiology	(6 UOC)
PSYC1011	Psychology 1B	(6 UOC)
SCOM2014	Science Communication	(6 UOC)

Stage 4**Session One**

HESC4501	Research Methods in Physical Activity	(6 UOC)
HESC4511	Practicum A	(6 UOC)
Electives courses		(12 UOC)

Session Two

HESC4521	Practicum B	(6 UOC)
Elective courses		(18 UOC)

Stage 4 Electives**Session One**

PHCM9516	Introduction to Public Health	(4 UOC)
PHPH3211	Cardiorespiratory and Exercise Physiology	(6 UOC)
PHPH3502	Skeletal Muscle in Health and Exercise	(6 UOC)
HESC4531	Movement Rehabilitation A	(6 UOC)

Session Two

BIOC3261	Human Biochemistry	(6 UOC)
FOOD3440	Advanced Nutrition	(6 UOC)
PATH3207	Musculoskeletal Diseases	(6 UOC)
PHCM9516	Introduction to Public Health	(4 UOC)
PHPH3131	Neurophysiology	(6 UOC)
SCOM2014	Science Communication	(6 UOC)

Notes on Stage 4

Electives: Students must select 6 UOC in session 1 and 12 UOC in session 2 from the available electives. In addition, they must select a further 6 UOC of electives in each of session 1 and session 2 so as to provide a total of 48 units of credit in Stage 4. The latter may be any appropriate UNSW courses for which they have satisfied prerequisites, but for the purposes of achieving professional accreditation, students are strongly encouraged to select courses from those listed.

General Education Requirements

Students in this program must also satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

For the requirements and regulations governing the Bachelor of Health and Sports Science, please refer to Program Structure section above.

3870 Bachelor of Science in Health and Exercise Science**BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Authority

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Health and Exercise Science
Tel: (02) 9385 2877
Email: s.boutcher@unsw.edu.au

Program Officer

Sue Cheng
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Program Description

The program offers a comprehensive education in the area of health and exercise with a focus on the use of physical activity as preventative and rehabilitative therapy. Students can choose to specialise in one of three areas of focus; cardiac, musculoskeletal, or neuromuscular rehabilitation. Four years of full-time study, or the part-time equivalent, leads to the award of a Bachelor of Science (in Health and Exercise Science). The Faculty Assessment Review group may award Honours to students who perform throughout the program with merit. The level of performance required for such award will be determined by the Assessment Review Group. Part-time students undertake a reduced program, subject to the availability of courses. A total of 192 units of credit must be successfully completed for the award of this degree. Graduates may expect to find employment in sports medicine clinics, rehabilitation clinics and hospitals, Commonwealth, State and Local Government departments, sports academies and institutes, professional organisations, sporting associations, universities, corporate health, private practice, and gymnasiums and fitness centres. In addition it is expected that graduates become members of the professional body: Australian Association of Exercise and Sports Science.

Program Objectives and Learning Outcomes

The degree is committed to excellence in teaching in the exercise sciences and in exercise clinical training. The degree is designed to enable students to:

- develop a thorough understanding of the relationship between physical activity and health
- develop a broad range of communication skills and an ability to work as a member and a leader of a team
- develop advanced problem solving skills and a capacity for critical thinking
- attain competencies in conducting a broad range of exercise-based clinical tests
- attain skills and detailed clinical knowledge relevant to cardiac, musculoskeletal, or neuromuscular rehabilitation

Program Structure

Stage 1 introduces students to the core science that will serve as a foundation for the following years. Courses include anatomy, histology, chemistry, biology, and psychology. Students will be introduced to the exercise area through three courses: exercise science, lifestyle and health, and exercise behavioural science. Stage 2 of the program begins to focus on human physiology, pathology, biochemistry, functional anatomy, and exercise physiology while building on the scientific principles acquired in Stage 1. Stage 3 of this multidisciplinary program moves the student towards an integrated understanding of health and exercise and includes courses such as advanced exercise physiology, exercise and health, biomechanics, motor control, cardiac rehabilitation, special populations, and clinical movement studies. Stage 4 continues to develop multi-disciplinary expertise through use of specialized courses and a wide range of electives. Electives include courses in clinical exercise physiology, movement rehabilitation, neuromuscular rehabilitation, nutrients and exercise, musculoskeletal diseases, and professional practice. Extensive industry experience is a key component of this final year with students participating in practicums in the University's Healthy Lifestyle Clinic and external (including hospital) placements. Understanding of scientific method is an important component of this program and all students will take a research methods course in Stage 4. Courses offer a mixture of traditional and interactive/case study approaches to learning. General Education is a requirement of all undergraduate courses at this university and can be taken in Stages 2 and 3.

Stage 1

Session One

BIOS1201	Molecules, Cells and Genes	(6 UOC)
CHEM1831*	Chemistry for Health, Exercise, Medical Science	(6 UOC)
HESC1501	Introductory Exercise Science	(6 UOC)
PSYC1001	Psychology 1A	(6 UOC)

Session Two

ANAT1511	Introductory Histology for Health and Exercise Science	(3 UOC)
ANAT2111	Introductory Anatomy	(6 UOC)
HESC1511*	Lifestyle, Kinanthropometry, and Health	(6 UOC)
HESC1531*	Exercise Behavioural Science	(6 UOC)
HESC1540*	Growth, Development, and Physical Activity	(3 UOC)

Stage 2

Session One

ANAT3131	Functional Anatomy 1	(6 UOC)
BIOC2181	Fundamentals of Biochemistry	(6 UOC)
PHPH2501	Human Physiology A	(6 UOC)
General Education Courses		(6 UOC)

Session Two

ANAT3141	Functional Anatomy 2	(6 UOC)
HESC2501	Exercise Physiology	(6 UOC)
PATH2201	Processes in Disease	(6 UOC)
PHPH2502	Human Physiology B	(6 UOC)

Stage 3

Session One

HESC3504	Physical Activity and Health	(6 UOC)
SESC2451*	Biomechanics for Health and Exercise Science	(6 UOC)
General Education Course(s)		(6 UOC)

Plus a further 6 credit points from:

HESC3561*	Research Topics in Health and Exercise Science	(6 UOC)
HESC3581	Physical Activity in Special Populations	(6 UOC)
PHPH3211	Cardiorespiratory and Exercise Physiology	(6 UOC)
PHPH3502	Skeletal Muscle in Health and Exercise	(6 UOC)

Session Two

FOOD3330	Nutrition for Health & Exercise Science	(6 UOC)
HESC3521	Advanced Exercise Physiology	(6 UOC)
HESC3571	Motor Control and Dysfunction	(6 UOC)

Plus a further 6 credit points from:

BIOC2291	Fundamentals of Molecular Biology	(6 UOC)
HESC3531*	Cardiac Rehabilitation and Exercise	(6 UOC)
HESC3591*	Research Topics in Health and Exercise Science	(6 UOC)
HESC3611*	Clinical Movement Studies	(6 UOC)
PATH3207	Musculoskeletal Diseases	(6 UOC)
PHPH3131	Neurophysiology	(6 UOC)
PSYC1011	Psychology 1B	(6 UOC)
SCOM2014	Science Communication	(6 UOC)

Stage 4

Session One

HESC4501	Research Methods in Physical Activity	(6 UOC)
HESC4511	Practicum A	(6 UOC)
Elective courses totalling		(12 UOC)

Session Two

HESC4521	Practicum B	(6 UOC)
Elective courses totalling		(18 UOC)

Stage 4 electives**

Session One

CMED9516	Introduction to Public Health	(4 UOC)
HESC3581	Physical Activity in Special Populations	(6 UOC)
HESC4531	Movement Rehabilitation A	(6 UOC)
HESC4541*	Clinical Exercise Physiology A	(6 UOC)
HESC4551*	Research Project	(6 UOC)
HESC4560	Professional Practice	(6 UOC)
PHPH3211	Cardiorespiratory and Exercise Physiology	(6 UOC)
PHPH3502	Skeletal Muscle in Health and Exercise	(6 UOC)
SESC4451	Research Projects in Biomechanics	(6 UOC)

Session Two

BIOC3261	Human Biochemistry	(6 UOC)
CMED9516	Introduction to Public Health	(4 UOC)
FOOD3440	Advanced Nutrition	(6 UOC)

HESC3531*	Cardiac Rehabilitation and Exercise	(6 UOC)
HESC3611*	Clinical Movement Studies	(6 UOC)
HESC4571	Research Project	(6 UOC)
HESC4581*	Clinical Exercise Physiology B	(6 UOC)
HESC4591*	Neuromuscular Rehabilitation	(6 UOC)
HESC4621*	Movement Rehabilitation B	(6 UOC)
HESC4631*	Nutrients, Metabolism, and Exercise	(6 UOC)
PATH3207	Musculoskeletal Diseases	(6 UOC)
PHPH3131	Neurophysiology	(6 UOC)
SCOM2014	Science Communication	(6 UOC)

* new courses (some other courses will have minor modifications such as name change, etc)

** offering of electives dependent on student numbers

Notes on Stage 4

Electives: Students must select 6 UOC in session 1 and 12 UOC in session 2 from the available electives. In addition, they must select a further 6 UOC of electives in each of session 1 and session 2 so as to provide a total of 48 units of credit in Stage 4. The latter may be any appropriate UNSW courses for which they have satisfied prerequisites.

General Education Requirements

Students in this program must also satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

For the requirements and regulations governing the Bachelor of Health and Exercise Science, please refer to Program Structure section above.

Faculty of Science

A Message from the Dean

We live in amazing times. Science and technology have extended the reach of our senses way beyond the edge of the map of human experience. We can now hear a single electron change orbit inside an atom. We can see into the outer reaches of the universe; feel movements deep inside the Earth's crust; reach back far into the ancient past; and eavesdrop on events inside a living cell. And we can meet and interact with other people in virtual communities that exist in virtual worlds.

When you study science with us at UNSW, you will be at the leading edge of this exciting revolution. You will learn how to learn, how to follow your curiosity about the world and the way it ticks, and you will acquire a tool-kit of knowledge and skills to equip you to step out into what we hope will be a lifetime of satisfying work.

This section of the Handbook covers the courses and programs available for study in science and provides a framework of the rules and regulations. Staff in the schools of the Faculty and the Science Student Centre are available to help you with administrative matters, course selection and career directions, and with any difficulties you may encounter in your studies.

We encourage you to explore the full diversity of opportunities on offer, to specialise on the one hand and yet gain an appreciation of scholarship in other areas. It is important that you learn to think creatively and critically, and to work with others in order to resolve complex problems.

We wish you every success at UNSW. We hope that the time that you spend with us, as valued members of our community, will be happy, stimulating and productive and that in future years you will look back on "the UNSW experience" as one which set you on the path to fulfilling your career and lifestyle aspirations. We believe that tomorrow's leaders will be drawn more and more from the ranks of science. We invite you to join us and let us help to make sense of this amazing world and prepare you to play your important part in a future that promises to be more amazing still.

Professor Michael Archer
Dean
Faculty of Science

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Faculty Information and Assistance

General Information

Science programs are built from the wide range of science and technology-based courses available across UNSW.

These programs are divided into two types: the general 'Science' and 'Advanced Science' programs, and a range of 'Vocational Science Programs' oriented more toward professional or industry-based careers. These programs, and the courses which they are composed of, are described in more detail under 'Program Rules and Information'. However, the information that follows in this section applies equally to both types of program.

Educational and academic activities at UNSW are organised and administered in faculties. The Faculty of Science is focused towards providing teaching and research in the sciences. Other faculties, including Engineering, Medicine, Arts and Social Sciences, and Commerce and Economics, also make a major contribution to activities in the sciences.

The basic educational building blocks in the sciences are the **courses** which students take. These courses are drawn together into **majors**, **minors**, and **study plans** providing coherent development of specific disciplines, and these programs are in turn drawn together to form **degrees or programs**. These majors, minors, and study plans are listed in the contents pages and are described in detail in this section of the Handbook.

Who Can Help?

This section of the Handbook is designed as a detailed source of information in all matters related to the Faculty of Science.

If you require advice about enrolment, degree requirements, progression within programs or any other general matters, contact the Science Student Centre, Robert Webster Building: tel: (02) 9385 6125, fax: (02) 9385 6127 or email: SSO@unsw.edu.au

The office is staffed between 9am and 5pm from Monday to Friday, but this may vary during non-session times.

For information and advice about course content and requirements, contact the appropriate schools/teaching units as indicated in the course descriptions.

The Faculty of Science Website

Please refer to the Faculty of Science website for further information: www.science.unsw.edu.au

Course Descriptions

Descriptions of courses offered in 2006 can be found in alphabetical order by the course code at the back of this Handbook or in the Online Handbook at: www.handbook.unsw.edu.au

Computing Information

Within the Faculty of Science, each of the schools manages or has access to undergraduate computing laboratories equipped with a combination of X-terminals, PCs and Macintoshes. These are connected through the campus-wide network, and are used extensively in undergraduate teaching and in providing email access to all students. This is provided through local and often specialised facilities and through access to regional and national centres. The systems accessible range from PCs to supercomputers together with the associated peripherals and support personnel. For further information on computing, please contact the school office.

Enrolment Procedures

New students will receive enrolment information with their offer of a place in their chosen program.

All students re-enrolling in 2006 should enrol via myUNSW during appointed enrolment periods. Information regarding enrolling online is available from UNSW Student Central, the Science Student Centre or via the web: <https://my.unsw.edu.au>

The course timetable for second and later years for the Science and the Advanced Science programs is available in late October/early November from the Science Student Centre, in the Robert Webster Building. All re-enrolling students should collect one of these timetables. **Students who expect to complete the requirements for their degree in 2006 or are proceeding to Honours will also need to collect form: SM2006.** This form

is to be completed and returned to the Science Student Centre by early January, after students receive their results.

Students not enrolling before the first day of Session 1 have no guarantee that a place is available in the courses offered in that year. This is particularly important for courses where laboratory space is limited. Students should be aware that some courses may require a field trip which may involve personal costs to the student. Consult individual course authorities for details. Quotas may apply to certain programs and courses and students should consult with program and course authorities for details.

Admission

For applicants applying for admission to UNSW through the Universities Admissions Centre (UAC), this section lists the UAC codes which correspond to the Science programs offered by UNSW.

For admission requirements for Science programs please refer to the appropriate entry in the current UAC Guide or refer to the UAC website: www.uac.edu.au

429000 Science

This is applicable to study in a wide range of Science areas in the Bachelor of Science program 3970, as indicated by the majors outlined in Table A under 'Plan Rules and Information'.

429003 Science (Communication)

This is applicable to study in a wide range of Science areas in conjunction with a Science Communication stream in the Bachelor of Science (Communication) program 3993. The majors available are the same as for 3970, with the exception of Philosophy, and History and Philosophy of Science.

429004 Science (Media and Communications)

This is applicable to study in a wide range of Science areas, in conjunction with a Media and Communications stream, in the Bachelor of Science (Media and Communications) program 3994. The majors available are the same as for 3970, with the exception of Philosophy, and History and Philosophy of Science.

429007 Medical Science

This is applicable to study in the Bachelor of Medical Science program 3991, as outlined in the 'Program Rules and Information' section in this Handbook.

429008 Environmental Science

This is applicable to study in the Bachelor of Environmental Science program 3988, as outlined in the 'Program Rules and Information' section in this Handbook.

429013 Advanced Science

This is applicable to study in areas of biological science, behavioural science, chemistry, mathematics and physics in the program 3972 as outlined in the Advanced Science study plan descriptions under 'Plans Rules and Information'.

This is also applicable to study in program 3986 (Mathematics and Finance) as outlined in the Study Plan description.

The number of places available each year in the Advanced Science programs is limited and this is reflected in a higher UAI. The minimum UAI for these programs is 90.

429016/429017 This is applicable to study Aviation (Flying or Management) in programs 3980/3981.

429018 This is applicable to study Biotechnology in program 3052.

429025 This is applicable to study Optometry/Science in program 3952.

429026 This is applicable to study Psychology in program 3432, leading to a Bachelor of Psychology.

429011 This is applicable to study Nanotechnology in program 3617.

425001 This is applicable to study a number of Materials Science and Engineering plans in physical and process metallurgy, ceramic and materials engineering.

Subject Areas, Programs and Study Plans in Science

Subject Area	Available in Program(s)	UAC Entry Code(s)
Advanced Mathematics	3972*	429013
Anatomy	3970, 3972, 3991	429000, 429013, 429007
Applied Mathematics	3972	429013

Aviation	3980 3981	429016 429017
Biochemistry	3970, 3972	429000, 429013
Anatomical Science	3970, 3972	429000, 429013
Biological Anthropology	3970	429000
Biomechanics	3970	429000
Biotechnology	3970, 3972 3052,	429000, 429013 429018,
Chemistry	3970, 3972	429000, 429013
Ecology	3970, 3972	429000, 429013
Environmental Sciences		
- Biology	3988	429008
- Marine	3988	429008
- Microbiology	3988	429008
- Chemistry	3988	429008
- Earth Science	3988	429008
- Geography	3988	429008
- Oceanography	3988	429008
Environmental Earth Science	3970	429000
Food Science and Nutrition	3970	429000
Food Science and Technology	3972	429013
Genetics	3970, 3972	429000, 429013
Geography(Physical and Human)	3970	429000
Geology	3970	429000
Geoscience	3972	429013
History and Philosophy of Science	3970	429000
Marine Science	3970	429000
Marine and Coastal Studies	3972	429013
Materials Science	3970, 3972, 3135, 3030 3130, 3138 3128	429000, 429013 425001
Mathematics	3970	429000
Mathematics and Finance	3986	429013
Mathematics and Computer Science	3972	429013
Medical Chemistry	3972	429013
Medical Microbiology and Immunology	3970, 3972	429000, 429013
Medical Science	3991	429007
Microbiology	3970, 3972	429000, 429013
Molecular Biology	3970, 3972	429000, 429013
Nanotechnology	3617	429011
Neuroscience	3972	429013
Optometry	3952	429025
Pathology	3991	429007
Pharmacology	3970, 3972, 3991	429000, 429013, 429007
Philosophy	3970	429000
Physical Oceanography/Meteorology	3970, 3972	429000, 429013
Physics	3970, 3972	429000, 429013
Physics and Astronomy	3972	429013
Physics with Computer Science	3972	429013
Physiology	3970, 3972, 3991	429000, 429013, 429007
Psychology	3970, 3972 3432	429000, 429013 429026
Pure Mathematics	3972	429013
Safety Science	3970	429000
Science Communication	3993	429003
Science Media and Communications	3994	429004
Spatial Information Systems	3970	429000
Statistics	3970, 3972	429000, 429013
Toxicology	3970	429000

Note: Certain majors listed above are also appropriate for combined Science degree programs. Students in these courses should consult their program advisor for details.

* Entry to the plan in Advanced Mathematics is by invitation only.

General Rules and Requirements

General Education Requirements

The University requires all students to complete a selection of General Education courses. The General Education Program is an integral part of all UNSW undergraduate programs and gives students the opportunity to

address some of the key questions they will face as individuals, citizens and professionals.

Students in the Science programs must complete General Education courses totalling 12 units of credit plus an additional 56 hours of study which fosters acceptance of professional and ethical action and social responsibility. See the 'General Education' section within this Handbook for a description of General Education course categories.

1. Mainstream courses may be substituted for General Education, but only with the approval of the Associate Dean (Student Affairs). Only 6 units of credit from mainstream courses may be substituted for General Education. Students may also only count a maximum of 6 units of credit of General Education courses from a single faculty.*
2. Students have the freedom to choose their General Education courses, according to the General Education requirements and restrictions detailed in the General Education section at the beginning of this Handbook.
3. Students enrolled in combined degrees are normally exempt from the General Education requirement.

* Please refer to the General Education section of this Handbook for further information on substitution.

Prerequisites, Corequisites and Excluded Courses

All programs are governed by basic conditions or rules that specify what a student needs to complete in order to qualify for a degree. Normally a student will study a mixture of compulsory and elective courses.

Compulsory or core courses are ones that must be studied, usually at the stage specified in the program. Often one compulsory course is a prerequisite for another that comes later.

Elective courses are ones that a student chooses in accordance with his or her own interests, subject to meeting prerequisites and corequisites, and capacity in the course. Some electives may have to be taken from a specified list.

Where a choice of courses is available in a program, students must take care to satisfy prerequisites and corequisites and not complete excluded courses.

Prerequisites are courses that must be satisfactorily completed before a student can progress to a later course. Prerequisites are specified in the course descriptions later in this Handbook and students without a necessary prerequisite for a course will be blocked from enrolment in that course.

Corequisites are courses that must either be completed successfully before, or studied concurrently with, the course for which it is prescribed.

Excluded courses are ones that cannot be counted towards the degree qualification.

Credit Transfer

Students admitted to programs administered by the Faculty of Science (including the Science component of combined degrees) may be granted credit for previous studies. All applications for credit transfer are subject to the following conditions:

1. Where students transfer from another tertiary institution, they shall not in general be granted standing in the course that is superior to that which they attained at the institution from which they transferred.
2. Only courses completed within ten years from the commencement of the UNSW degree will be eligible for transfer credit.
3. The credit granted to students admitted to a program administered by the Faculty of Science based upon any completed degrees or awards held by the applicant may not exceed the amount that will permit the applicant to qualify for the degree by completing the requirements for the latter half of the degree.
4. The credit granted to students admitted to a program administered by the Faculty of Science based upon a partially completed degree or award held by the applicant may not exceed the amount that will permit the applicant to qualify for the degree by completing the requirements for the final year of the degree (excluding Honours).
5. The credit granted to students admitted to a combined degree with the Faculty of Science may not exceed the amount that will permit the applicant to qualify for the science component of the combined degree by completing the requirements for the latter half of the Science component of the degree.
6. Students who have been awarded the degree of Bachelor at Pass level may be permitted to enroll for the award of the degree at Honours level with credit for all courses completed if, during the studies for the Pass degree, they have satisfied the prerequisites for entry to the Honours program determined by the school concerned.

Applicants should note that eligibility for transfer credit in a Science program does not guarantee admission to that program.

Study Load

Students may not undertake a study load of more than 24 units of credit in any session (including General Education). This can be exceeded only in exceptional circumstances by students with an excellent academic record and requires the permission of the Associate Dean (Student Affairs). Students with external commitments, such as part-time employment in excess of ten hours per week, should take fewer courses each session. External commitments will not be taken into consideration in relation to such matters as extensions of time for submission of written work or failure to attend examinations (which may, for some courses, be scheduled on Saturday mornings). Students not on good academic standing will be notified in writing and may be required to show why they should be allowed to continue in the program or may be given a restricted program.

Students wishing to take courses additional to those required for the award should be aware that the relevant courses may attract an additional fee, payable up-front, as non award courses.

Academic Standing

A level of academic standing will be assigned to students at the end of each main session. These levels are defined as: Good Standing (the student's current progress is deemed satisfactory), Referral, Probation 1, Probation 2, Suspension, Probation 3 and Exclusion. Movement between levels is based on progress, measured by proportion of load passed. The Program Authority assigns an advisor to each student not in good standing. Continued poor progress can lead to suspension (one year with automatic readmission) or exclusion (two years without automatic readmission). For further information please see 'General University Rules & Student Information' earlier in this Handbook.

Progression through Advanced Science, Environmental Science and Medical Science programs is subject to academic performance. Students enrolled in these programs are required to attain an average of 65 or higher each session of their program.

Program and Course Quotas

Quotas are imposed on some programs and courses (usually because of class size constraints related to space). Where quotas are imposed, students' eligibility to enrol will be assessed on academic merit or on the basis of the requirements of the program of study in which the student is enrolled.

Summary of Programs

The main aims of these Science programs may be summarised as providing opportunities for students to prepare themselves for careers in research, technology, science, mathematics and education, or areas of management or public policy which involve the use of science or mathematics.

The Science programs (**3970, 3991, 3993, 3994**) lead to the award of the degree of Bachelor of Science (BSc) at Pass level on the completion of a three-stage program, taking three years of full-time study. A student who completes the program with a high standard of achievement may be permitted to continue to a fourth year in order to take an Honours degree.

The Advanced Science programs (**3972, 3986**) and the Bachelor of Environmental Science (**3988**) lead to the award of Bachelor of Science (BSc) on the completion of a four stage program, at Honours or Pass level (level of award and Honours is based on academic performance), taking four years of full-time study. Depending on their program of study, students in their fourth year undertake either a research Honours program or a program of coursework and research.

The time specified (three or four years) is the **minimum** time required for completion of each program. Students may complete program requirements over a longer period of time or as part-time candidates. Students contemplating part-time study should note that with few exceptions classes are offered in the day only. This applies even at first year level and means that it is not possible to complete studies by evening classes alone.

Science Program (3970)

The three-year Science program has been designed for students who seek a 'generalist' degree in which there is a large element of choice. A student can combine courses from two or more Science disciplines, or take courses from outside the Science disciplines.

Advanced Science Programs (3972, 3986)

This program differs from the standard Bachelor of Science program (3970) in that it includes advanced level courses, an Honours year and options tailored to an individual's aptitude and interests.

A feature of the Advanced Science program is the requirement that all students enrol in and complete a specified study plan in a particular discipline or specialisation.

Environmental Science Program (3988)

This is a four-year degree leading to a Bachelor of Environmental Science. A student must complete the core in Environmental Science plus a specialisation in one of the approved disciplines.

Bachelor of Science (Communication) Program (3993)**Bachelor of Science (Media and Communications) Program (3994)**

These are three-year Science programs in which students must complete courses in a Communication or Media Studies stream and either a major or two minors in Science. Subject to certain conditions, a student may be permitted to continue into a fourth year to complete an Honours degree.

Medical Science Program (3991)

This is a three-year degree based on structured study plans leading to a Bachelor of Medical Science. Subject to certain conditions, a student may be permitted to continue into a fourth year to complete an Honours degree.

Combined Degree Programs

In these programs, Science is combined with studies in another faculty (e.g. Engineering, Law, Arts and Social Sciences etc). The basic requirement from Science is that a student should complete at least 84 units of credit in Science including a major selected from Table A.

Courses

Typically, each program requires study of a number of prescribed core courses and elective courses at specified stages or levels to ensure a sound basis in the discipline. Each course is assigned a 'Level', which corresponds to the defined stages for each program. There are limits on the number of Level I courses that can be studied in a program (please refer to individual program descriptions). Students are not normally allowed to enrol in courses at a given level before reaching the corresponding stage of the program. Levels are:

Level I	Stage 1
Level II	Stage 2
Level II/III	Stage 2 or 3
Level III	Stage 3 (also Stage 4 in some Advanced Science programs)
Level IV	Stage 4 (or Honours year)

Program Rules and Information**3970 Bachelor of Science****BSc****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The three-year Science degree has been designed for students who seek a 'generalist' degree in which there is a large element of choice. A student can combine courses from 2 or more Science disciplines, or take courses from outside the Science disciplines.

The basic rules for the degree are set out in the following sections under Program Objectives and Academic Rules. Students in the Science program need to ensure that they complete at least one Major and either a second Major or a Minor sequence. At least 84 units of credit (out of a total of 144) must be taken from Science. The remainder may be in another Faculty. Subject to certain conditions, a student may be permitted to continue into a fourth year to complete an Honours degree.

Program Objectives and Learning Outcomes

This program has been designed to:

- develop and sustain an interest in and knowledge of Science.

- develop a working knowledge of scientific methods of investigation.
- encourage curiosity and creative imagination and an appreciation of the role of speculation in the selection and solution of problems, the construction of hypotheses, and the design of experiments.
- develop an appreciation of scientific criteria and a concern for objectivity and precision.
- develop confidence and skill in formulating problems and in treating both qualitative and quantitative data.
- develop the ability and disposition to think logically, to communicate clearly by written and oral means, and to read critically and with understanding.
- develop the habit of seeking and recognising relationships between phenomena, principles, theories, conceptual frameworks and problems.
- promote understanding of the significance of science, technology, economics and social factors in modern society, and of the contributions they can make in improving material conditions.
- provide opportunities for the development of students' motivations and social maturity, and an awareness of their capabilities in relation to a choice of career which will be fruitful to themselves and to society.
- provide opportunity to study science in combination with other disciplines.

Program Structure**Majors and Minors**

For information regarding course requirements for majors and minors, please consult **Table A (Majors)** and **Table B (Minors)** under 'Plan Rules and Information' following in this Handbook, or contact the Science Student Centre for further details.

Elective Courses

Students enrolled in any Science degree may normally only take as electives any courses (subject to satisfying prerequisites) which are specified as electives for their degree, or available within a major or minor in program 3970.

Graduation and Majors

In order to graduate, students must satisfy requirements for the award by passing all the courses and requirements specified for their program. Students who complete requirements will be awarded the degree of Bachelor of Science at Pass or Honours level with a major in the area of specialisation (usually indicated by the name of the major). The award will appear on the testamur as:

Bachelor of Science in (name of major)

or

Bachelor of Science with Honours in (name of Honours specialisation)

General Education Requirements

Students in this program must also satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules**Conditions for the Award of the Degree**

1. A student must complete 144 units of credit including 12 units of General Education.
2. The degree must contain a Major sequence of study and either a second Major or a Minor sequence.
3. A student must complete at least 36 units and no more than 60 units in Level I courses from at least three schools.
4. A student must complete at least 24 units at Level I from Science Schools (defined as schools in the Science Faculty plus those in other faculties that currently provide programs under the authority of the Faculty of Science).
5. No student may commence Level II courses until 24 Level I units have been successfully completed.
6. No more than 18 Level I units of credit in any one subject area may be counted towards the completion of the degree.
7. A student must complete a minimum of 84 units of credit from Science Schools (defined as Schools in the Science Faculty plus those in other Faculties that currently provide programs under the authority of the Faculty of Science).

8. Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the requirements for Stages 1, 2 and 3 of the BSc and to have satisfied prerequisite requirements as specified. All General Education must also have been completed. Students who have not qualified for the BSc at Pass level will not be permitted to enroll in Honours.

9. A Major sequence is defined as: at least 42 units at Level II and III in a single discipline or area of study, including at least 18 units at Level III.

10. A Minor sequence is defined as: 24 units of credit at Level II or III. The Minor may either consist of courses available within but not taken as part of a Major or may be a sequence as defined in Table B.

11. Where a student does Majors in two cognate areas that have courses in common, a student may be permitted to have up to 12 units at Level II and 6 units at Level III be counted towards each Major sequence.

3972 Advanced Science

Bachelor of Science BSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Bachelor of Science (Advanced Science) program is designed to cater for the specific abilities and interests of talented students with a UAI (Universities Admissions Index) above 90.00.

A feature of the design of the Advanced Science programs is the requirement that all students enrol in a specific study plan on commencement of the program.

Each study plan is designed to link courses in such a way that a coherent pattern of study is achieved in a specific discipline or specialisation.

A wide choice of study plans, designed to meet specific aims and objectives, is available. Most study plans are identified with a particular school or discipline (e.g. Anatomy, Chemistry), but some are multidisciplinary (e.g. Mathematics and Computer Science).

Note: Some courses and plans are only available in the Advanced Science programs. e.g. Mathematics and Finance, Neuroscience, Physics and Astronomy, etc.

This program differs from the standard Bachelor of Science program (3970) as it includes advanced level courses, an Honours year and options tailored to an individual's aptitude and interests.

Program Objectives and Learning Outcomes

This program aims to provide students with a working knowledge of areas of scientific investigation in order to place them at the forefront of research and discovery in the many rapidly developing areas of science.

Program Structure

Conditions for the Completion of the Advanced Science Program

- A student must complete 144 units of credit including 12 units of General Education in Stages 1-3 and a 48 unit Honours sequence at Stage 4.
- The degree must contain a study plan as specified for each Advanced Science program in this section of the Handbook
- A student must complete at least 36 units of credit and no more than 48 units of credit in Level I courses except where specified in a particular program.
- A student must complete before the end of Stage 3 at least two 3 units of credit courses taken from 'Table X', given below.
- No student may normally commence Level II courses until 24 Level I units have been successfully completed unless approved by the Program Authority.
- Progression to Stages 3 and 4 is subject to academic performance. A student will be required to have attained an average of 65 or higher in courses relevant to the major area and cognate subjects in each prior stage.
- Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the

requirements for Stages 1, 2 and 3 of the BSc (Adv Sci) and to have satisfied prerequisite requirements as specified. Students who have not met the Stages 1, 2 and 3 requirements will not be permitted to enrol in Honours.

Study Plans Available in Advanced Science

Advanced Mathematics (*by invitation only*)

Anatomy
Applied Mathematics
Biochemistry
Biological Science
Biotechnology
Chemistry
Ecology
Food Science and Technology
Genetics
Geosciences
Marine and Coastal Studies
Materials Science
Mathematics and Computer Science
Mathematics and Finance (program 3986)
Medical Chemistry
Medical Microbiology and Immunology
Microbiology
Molecular Biology
Neuroscience
Pharmacology
Physical Oceanography/Meteorology
Physics
Physics and Astronomy
Physics and Computing
Physiology
Psychology
Pure Mathematics
Statistics

For information regarding course requirements for study plans, please consult **Study Plans in Advanced Science** under 'Plan Rules and Information' section following in this Handbook, or contact the Science Student Office for further details.

Table X

CHEM1000
LIFE1001
MATH1000
PHYS1000
LIFE2001

General Education Requirements

Students in this program must also satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

See also 'Conditions for the Completion of the Advanced Science Program' above.

Rules on Progression and Transfer in the Advanced Science Programs

1. Transferring Study Plans

Students must apply in writing to transfer between study plans within each of the Advanced Science programs. Applications are assessed on academic performance and approval is subject to places being available in the nominated study plan.

2. Accelerated Progression in Advanced Science Programs

There is provision for exceptionally talented students to take higher level courses in Stage 1. Contact the Science Student Centre for details.

3. Progression to Stage 4 Honours in Advanced Science

Progression to Stage 4 is subject to academic performance. Students seeking to enrol in a Stage 4 Honours are required to have the approval of the Head of School and normally will be required:

- to have completed the requirements for Stages 1, 2 and 3 of the specific study plan and to have satisfied prerequisite requirements as specified in that study plan. All General Education also must have been completed;
- to have attained an average of 65 or higher in each stage of the program.

Students should also seek the guidance of the appropriate Head of School at an early stage of study to ensure that the study plan being followed is best suited to lead to the Year 4 Honours.

In addition, admission to a particular Stage 4 Honours is subject to appropriate research and supervision resources being available. Quotas may be imposed for entry in any year, in which case admission will be determined on academic merit.

Students who do not attain an average of 65 or higher in Stage 3 of their program are normally required to transfer to the Science program (3970) and take out the BSc award at Pass level.

4. Transfers from Advanced Science to the Science Program

Students enrolled in the Advanced Science programs (program codes 3972, 3986) who wish to take out the BSc award at Pass level and without proceeding to Stage 4 are required to transfer to the Science program (3970).

Applications to transfer should be lodged no later than the census date for the session in which the student expects to satisfy requirements. Students applying after that date may not be able to graduate in the next round of graduation ceremonies. The application should state the 3970 major in which the student wishes to be enrolled.

Students must satisfy all requirements for the designated Science (3970) major in order to qualify for the award of the BSc. Further information regarding the transfer from the Advanced Science program to majors that are available in the Science program is available through the Science Student Centre.

Students entering Year 3 or Stage 4 of a combined degree program will need to consult with the Science Student Centre.

5. Elective Courses

Students enrolled in any Science program may normally only take as electives any courses (subject to satisfying prerequisites) which are specified as electives for their degree, or available within a major or minor in program 3970.

6. Graduation and Study Plans

In order to graduate, students must satisfy requirements for the award by passing all courses and the requirements specified for their program. Students who complete requirements will be awarded the degree of Bachelor of Science at Honours or Pass level with a major in the area of specialisation (usually indicated by the name of the major or study plan, except that for some Honours candidates the name of the Honours specialisation will appear).

Students who successfully complete Stage 4 of their program will be considered for the award of Honours. The following scale generally applies to Honours gradings and, depending on the structure of the program, is based either on performance in the Stage 4 Honours or on performance over the whole 4 stages of the program:

Honours Class 1 - mark or weighted average of 85 or greater

Honours Class 2 Division 1 - mark or weighted average from 75 to 84

Honours Class 2 Division 2 - mark or weighted average from 65 to 74

Honours Class 3 or Pass - mark or weighted average below 65

The award will appear on the testamur as:

Bachelor of Science with Honours in (name of specialisation)

3973 Advanced Science in Medical Physics

Bachelor of Science BSc

Note: Not available to commencing students in 2006

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This Bachelor of Science (Advanced Science) degree program has a specialisation in Medical Physics.

Medical Physics is the application of physics to diagnosis, treatment and prevention of human disease and disability. There is a continuing demand for professional physicists in this area as new physical techniques are rapidly translated into new medical instruments. There is an increasing demand for health physicists in industry and the public service to

monitor environmental and occupational sources of radiation and other hazards.

Program Objectives and Learning Outcomes

This program aims to provide an essential strong background in conventional physics including electronics and computing, a general background in the biological sciences and some specialised knowledge in biophysics and medical physics.

Program Structure

Please refer to program entry for 3972 Advanced Science for 'Conditions for Completion of the Advanced Science Program'.

For information regarding program requirements for Medical Physics 3973 please refer to the 'Plan Rules and Information' section following in this Handbook.

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Honours

Honours may be awarded in this program. The basis is a suitably weighted performance over the last three stages of this four-year advanced science degree.

Academic Rules

For academic rules relating to this program, please refer to the program entry for 3972 Advanced Science.

3986 Advanced Science in Mathematics and Finance

Bachelor of Science BSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This Bachelor of Science (Advanced Science) degree program has a specialisation in Mathematics and Finance.

The Mathematics and Finance plan is a four-year plan in which Honours may be awarded on the basis of a weighted average mark of all courses studied in the plan.

Note: Students applying through UAC should choose Advanced Science in their preferences. On admission, students will be transferred to this program on request.

Program Structure

Please refer to program entry for 3972 Advanced Science for 'Conditions for Completion of the Advanced Science Program'.

For information regarding program requirements for the Mathematics and Finance 3986 please refer to the 'Plan Rules and Information' section following in this Handbook.

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

For academic rules relating to this program, please refer to the program entry for 3972 Advanced Science.

3988 Bachelor of Environmental Science

BEnvSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Environmental Science program contains a core sequence of compulsory courses and a choice of disciplinary specialisations. The specialisations include: Biology, Chemistry, Geography, Earth Science, Marine Biology, Microbiology and Oceanography. Students will need to select a specialisation early in their programs.

Program Objectives and Learning Outcomes

The aim of the program is to provide a strong education in the skills and knowledge necessary to work or carry out research as an environmental scientist. In their final year, students carry out a major independent research project and may also do advanced coursework.

The BEnvSc is designed as a four-year (full-time) program. There is also an opportunity for students to combine the BEnvSc with a Bachelor of Arts by taking a five-year program. Students who are unable to complete the BEnvSc may transfer to the three-year Bachelor of Science and graduate with a BSc with a major in one of the environmental areas.

Program Structure**Stage 1**

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
ENVS1011	Environmental Science 1	(6 UOC)
GEOS1211	Environmental Earth Science	(6 UOC)
GEOS1701	Environmental Systems and Processes	(6 UOC)
MATH1041	Statistics for Life and Social Sciences*	(6 UOC)

And 12 units of credit in one or more of the discipline specialisations

**Note: Students who choose the Oceanography specialisation take MATH1231, NOT MATH1041.*

Stage 2

ECON1107	Elements of Environmental Economics	(6 UOC)
ENVS2030	The Human Environment	(6 UOC)
ENVS2801	Aspects of Environmental Policy and Law	(6 UOC)

And ONE of the following courses:

BEES2041	Data Analysis for Life and Earth Sciences	(6 UOC)
MATH2301	Mathematical Computing	(6 UOC)
MATH2841	Statistics SS	(6 UOC)
Plus General Education courses		(6 UOC)

18 units of credit in Level 2 courses of the discipline specialisation.

Stage 3

BIOS3071	Conservation Biology and Biodiversity	(6 UOC)
CHEM3901	Environmental Toxicology	(6 UOC)
GEOH3911	Environmental Impact Assessment	(6 UOC)
Plus General Education courses		(6 UOC)

24 units of credit in Level 3 courses of the discipline specialisation.

Stage 4

Environmental Honours stream relevant to discipline specialisation.

For entry to Honours, a student must have the permission of the relevant Head of School.

Disciplinary Specialisations**Biology**

Level 1	BIOS1201
Level 2	BIOS2011, BEES2041, plus at least 6 units of credit from: BIOS2031, BIOS2051, BIOS2061
Level 3	BIOS3061, BIOS3111 plus a further 6 units of credit of Level 3 BIOS

Chemistry

Level 1	CHEM1021 or CHEM1041, MATH1031
Level 2	CHEM2041, plus 12 units of credit from CHEM2011, CHEM2021, CHEM2031
Level 3	CHEM3041, CHEM3311, plus 6 units of credit from CHEM3011, CHEM3021, CHEM3031 plus 6 UOC of Level 2 Chemistry

Note: Students in the Chemistry specialisation take CHEM3311, NOT CHEM3901

Earth Science (formerly Geology)

Level 1	GEOS1111
Level 2	18 units of credit from GEOS2171, GEOS2181, GEOS2291, GEOS2071, GEOS2721
Level 3	GEOS3131, GEOS3281, plus a further 6 units of credit of Level 3 GEOS

Geography

Level 1	GEOH1601
Level 2	GEOS2711, GEOS2721 plus a further 6 units of credit of Geography
Level 3	GEOS3761 plus a further 12 units of credit of Level 3 Geography

Marine Biology

Level 1	BIOS1201
Level 2	BIOS2011, BIOS2031, BEES2041, MSCI2001
Level 3	BIOS3071, BIOS3081, BIOS3091 plus 6 units of credit of Level 3 Marine Science

Microbiology

Level 1	BIOS1201, CHEM1021
Level 2	BIOC2201, BIOS2011, MICR2011, MICR2201
Level 3	BIOT3081, MICR3071 plus 6 units of credit of Level 3 Microbiology

Oceanography

Level 1	MATH1231*, PHYS1121, PHYS1221
Level 2	MATH2841, MATH2011, MATH2120, MATH2240, PHYS2810
Level 3	MATH2301, MATH3121, MATH3241, MATH3261

Note: In all specialisations students may take more advanced versions of courses where these exist.

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is 12 UOC, usually taken in second and third year studies, as indicated in the Program Structure.

For further information, please refer to the General Education section in this Handbook. Students in Environmental Science need to be aware that there are a number of General Education courses which they are excluded from taking, and are advised to consult the BEES Student Office.

Academic Rules**Conditions for the Award of the Environmental Science Degree**

- A student must complete 144 units of credit including 12 units of General Education in Stages 1-3 and 48 unit Honours sequence at Stage 4.
- The degree must contain the core in Environmental Science plus a specialisation in one discipline.
- A student must complete at least 36 units of credit and no more than 60 units of credit in Level 1 courses.
- No student may normally commence Level 2 courses until 24 units of credit Level 1 have been successfully completed unless approved by the program adviser or Associate Dean.
- Progression to Stages 3 and 4 is subject to academic performance. A student will be required to have attained an average of 65 or higher in courses relevant to the major area and cognate subjects in each prior stage.
- Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the requirements for Stages 1, 2 and 3 of the BEnvSc and to have satisfied prerequisite requirements as specified. All General Education must also have been completed. Students who have not qualified for the BEnvSc at Pass level will not be permitted to enrol in Honours.

3993 Bachelor of Science (Communication)**BSc(Comm)****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

Science Communication is designed to serve students interested in a career in the human and social aspects of science, from entrepreneurship in biotechnology to science journalism and from advising on environmental policy to teaching science to the public. Offered for the first time in 2000, the program leads to a three-year Pass or four-year Honours degree. It provides students with a strong grounding in science together with conceptual insights and practical skills in communication. Students address large scale issues, like the role of science in society, as they impact on small scale interactions, such as a conversation between a patient and her doctor. This scope of concerns makes the degree a highly interdisciplinary undertaking for the student who likes to marry theory with practice.

Program Objectives and Learning Outcomes

Please visit the Science Communication website for information on Program Objectives and the Learning Outcomes: www.scom.unsw.edu.au

Program Structure

Science Communication electives consist of SCOM courses that are not part of the degree program's core as well as selected courses outside SCOM that address key aspects of human, organisational, and mass communication. They can be from Psychology, Marketing, Sociology, Media and Communication, Geography, Safety Science, or like fields, but they may not be from a student's major or minor area of study. A SCOM elective must be approved by the Science Communication Program Office.

Stage 1

SCOM1011	Science, Technology and Society	(6 UOC)
SCOM1021	Introduction to Science Communication	(6 UOC)
24 units of credit from two Science schools		
Electives totalling 12 units of credit		

Stage 2

SCOM2021	Professional Science Communication	(6 UOC)
And ONE of the following courses:		
HPSC2400	Knowledge and Power	(6UOC)
HPSC2500	Environment, Technology and Politics	(6UOC)
HPSC2850	Information Technology, Politics and the Media	(6UOC) (not offered in 2006)

Electives in Communication totalling 6 units of credit

18-24 units of credit in a Science Major or 2 Minors (as required by Major or Minors)

Further electives to give a total of 42 units of credit for Stage 2
Plus General Education (6 UOC)

Stage 3

SCOM3011	Communicating Science: Theory and Practice	(6 UOC)
SCOM3021	Science Communication Internship	(6 UOC)
Electives in Communication totalling 6 units of credit		
24 units of credit in a Science Major or Minors (continued from Stage 2)		
Plus General Education (6 UOC)		

Honours

Please contact the Faculty of Science for information on Honours studies.

Academic Rules

1. A student must complete 144 units of credit including 12 units of credit of General Education.
2. The degree must contain a Communication major sequence and either a second major drawn from those approved with the BSc (excluding those from the Schools of Philosophy and History and Philosophy of Science) or two approved minor sequences.
3. A student must complete at least 36 and no more than 60 units of credit in Level I courses from at least three schools.
4. A student must complete at least 24 units of credit at Level I from Science Schools (as defined in the rules attached to the conditions for the award of the BSc excluding the Schools of Philosophy and History and Philosophy of Science).
5. No student may commence Level II courses until 24 Level I units of credit have been successfully completed.

6. A student must complete a minimum of 84 units of credit from Science schools (see 4 above).

7. Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the requirements for Stages 1, 2 and 3 of the BSc (Comm) and to have satisfied prerequisite requirements as specified. All General Education must also have been completed. Students who have not qualified for the BSc (Comm) at Pass level will not be permitted to enrol in Honours.

3994 Bachelor of Science (Media & Communications)**BSc(Media)****Typical Duration**

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The Science Media and Communications program leads to a three-year Pass or four-year Honours degree. It is aimed at producing students who have a strong grounding in science together with conceptual and practical skills in media and communication studies. Students gain creative, practical experience with digital media in the production of audiovisual and multimedia works in an advanced multimedia laboratory, together with an understanding of the history and social impacts of media technologies. This focus is combined with a Major or two Minors in Science.

Program Objectives and Learning Outcomes

Please visit the website of the School of Media, Film and Theatre in the Faculty of Arts and Social Sciences for information regarding the Program Objectives and Learning Outcomes, as they teach the core program of multimedia courses - <http://media.arts.unsw.edu.au/media/index.html>

Program Structure**Stage 1**

MDCM1000	New Media Technologies A	(6 UOC)
MDCM1001	New Media Technologies B	(6 UOC)
24 units of credit from two Science Schools		
Electives totalling 12 units of credit		

Stage 2

MDCM2000	Researching and Writing for New Media	(6 UOC)
MDCM2002	Media Production	(6 UOC)
MDCM2003	Multimedia Production	(6 UOC)
18-24 units of credit in a Science Major or 2 Minors (as required by Major or Minors)		
Further electives to give a total of 42 units of credit for Stage 2		
Plus General Education (6 UOC)		

Stage 3

MDCM3000	Media Forms	(6 UOC)
MDCM3002	Advanced Media Production	(6 UOC)
MDCM3003	Multimedia Production in Industry Contexts	(6 UOC)
24 units of credit in a Science Major or Minors (continued from Stage 2)		
Plus General Education (6 UOC)		

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is usually 12 UOC taken in second and third year studies.

For further information, please refer to the General Education section in this Handbook.

Honours

Please contact the Faculty of Science for information on Honours studies.

Academic Rules

1. A student must complete 144 units of credit including 12 units of credit of General Education.

2. The degree must contain a Media and Communications major sequence and either a second major drawn from those approved within the BSc (excluding those from the Schools of Philosophy and History and Philosophy of Science) or two approved minor sequences.

3. A student must complete at least 36 units of credit and no more than 60 units of credit in Level 1 courses from at least three Schools.

4. A student must complete at least 24 units of credit at Level 1 from Science schools (as defined in the conditions for the award of the BSc excluding the Schools of Philosophy and History and Philosophy of Science).

5. No student may commence Level 2 courses until 24 Level 1 units of credit have been successfully completed.

6. A student must complete a minimum of 84 units of credit from Science schools (see 4 above).

7. Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the requirements for Stages 1, 2 and 3 of the BSc (Media) and to have satisfied prerequisite requirements as specified. All General Education must also have been completed. Students who have not qualified for the BSc (Media) at Pass level will not be permitted to enrol in Honours.

3991 Bachelor of Medical Science

BMedSc

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

This three-year degree program will provide the basis for a career in biomedical research and is an appropriate first degree for students planning to enter graduate medical or paramedical programs.

Medical science is the area of science which underpins the practice of medicine. It incorporates study of the structure and function of the human body (anatomy and physiology) as well as the way in which our form and function is inherited (genetics) and then develops from the fertilised ovum (embryology). It deals with the chemistry of living organisms (biochemistry) with particular reference to man, the role of bacteria, viruses and other microorganisms in disease (microbiology) as well as drugs which are used to cure human diseases (pharmacology), the natural defenses of the body (immunology), and the general process leading to disease (pathology).

Students enrolled in this program may have the opportunity to undertake a fourth year that involves a research program leading to an Honours degree.

Program Objectives and Learning Outcomes

Students enrolled in this program will have the opportunity to gain a broad perspective of the biomedical sciences, as well as to specialise in one or more of the above disciplines.

Program Structure

Stage 1

BIOS1101	Evolutionary and Functional Biology	(6 UOC)
BIOS1201	Molecules, Cells and Genes	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
or		
CHEM1031	Higher Chemistry 1C	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
or		
CHEM1041	Higher Chemistry 1D	(6 UOC)
PLUS 6 units of credit from:		
MATH1031	Mathematics for Life Sciences	(6 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)
SCIF1110	Perspectives in Medical Science 1	(3 UOC)

One General Education course totalling 3 units of credit.

Elective courses totalling 12 units of credit offered by the following Schools: Computer Science, Mathematics, Physics, History and Philosophy of Science, Psychology

Stage 2

SCIF2220 Perspectives in Medical Science 2 (3UOC)

Courses totalling **at least 36 units of credit** from the following: ANAT2111, ANAT2241, ANAT2341, ANAT2601, ANAT2611, BIOC2101* or BIOC2181, BIOC2201* or BIOC2291, MICR2011**, MICR2201, PHPH2101, PHPH2201, PHPH2011, PATH2201, BIOS2621 or BIOS2021

One General Education course totalling 3 units of credit.

Elective courses totalling **6** units of credit from the above courses or from the following areas: Biological Science, Chemistry, Computing, Mathematics, Physics, Psychology, History and Philosophy of Science.

**Students are encouraged to enrol in the more advanced biochemistry courses, and should note that BIOC2101 and BIOC2201 are prerequisites in many Stage 3 courses*

***Students taking MICR2011 are encouraged enrol in BIOS2021 (or BIOS2621). The prerequisite course, MICR2201 maybe waived with the permission of the course authority.*

Note: Students anticipating doing fourth year Honours program should contact the relevant head of school for advice.

Stage 3

Courses totalling **42** units of credit from the following subject areas: Anatomy, Biochemistry and Molecular Biology, Genetics, Microbiology, Immunology, Pathology, Physiology & Pharmacology, Psychology, Biotechnology. Students must nominate a major discipline by taking at least 18 units of credit at level 3 in one of these subject areas and fulfilling other course requirements specified for that major.

General Education courses totalling **6** units of credit

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Honours

Stage 4

Honours may be taken in the major discipline, subject to progress at credit level through the program. Intending Honours students should consult the Head or Honours Coordinator of the appropriate School. Students who successfully complete Stage 4 of their program will be considered for the award of Honours.

Academic Rules

Conditions for the Award of the Medical Science Degree

- A student must complete 144 units of credit including 12 units of General Education in Stages 1-3.
- Honours is available to suitably qualified students and consists of a 48 unit of credit Honours sequence at Stage 4.
- The degree must contain a sequence of study as specified in the program description
- A student must complete at least 36 units and no more than 48 units in Level 1 courses
- A student must complete before the end of Stage 3 the two 3 unit courses SCIF1110 and SCIF2220.
- No student may normally commence Level 2 courses until 24 Level 1 units have been successfully completed unless approved by the Head of School.
- Progression to Stages 3 and 4 is subject to academic performance. A student will be required to have attained an average of 65 or higher in courses relevant to the major area and cognate subjects in each prior stage.
- Progression to Stage 4 Honours is subject to academic performance. Students seeking to enrol in Honours are required to have the permission of the Head of School, to have completed all the requirements for Stages 1, 2 and 3 of the BMedSc and to have satisfied prerequisite requirements as specified. All General Education must also have been completed. Students who have not qualified for the BMedSci at Pass level will not be permitted to enrol in Honours.

Specialist Degrees

3980 Bachelor of Aviation (*Flying stream*)

BAv

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The degree of Bachelor of Aviation is offered by the Faculty of Science with input from the Faculty of Engineering.

The aim of this program is to provide an opportunity for students to prepare for a career in the aviation industry. Program 3980 is a Flying stream which allows students the opportunity for flight training. A Management stream is also offered which prepares students more specifically for careers in the managerial sector of the aviation industry - for this Management stream, please refer to program entry for 3981 Bachelor of Aviation (Management stream).

Both streams consist of a core courses selected from the faculties offering the program together with a range of options. The Flying stream additionally includes flight training to a minimum level of Commercial Pilots Licence (CPL) with additional flight training options available dependent upon student progress and requirements. It should be noted that due to the block training nature of the flight training program, teaching periods might not correspond to standard academic sessions.

Program Objectives and Learning Outcomes

This program aims to prepare students for a career in flying, as a pilot.

Program Structure

Stage 1

AVEN1310	Basic Mechanics	(3 UOC)
AVEN1910	Introduction to Aircraft Engineering	(3 UOC)
AVIA1002	Flying Training 1	(12 UOC)
AVIA1321	Fundamentals of Aviation	(6 UOC)
AVIA1700	Aviation Safety Management 1	(3 UOC)
AVIA1900	Aviation Economics	(3 UOC)
MATH1031	Mathematics for Life Sciences	(6 UOC)
PHYS1149	Physics 1A (Aviation)	(6 UOC)
PHYS1249	Environmental Physics (Aviation)	(3 UOC)
SESC1580	Risk Management 1	(3 UOC)

Stage 2

AVEN2920	Aviation Technologies 2	(3 UOC)
AVIA2003	Flying Training 2	(18 UOC)
AVIA2210	Aviation Human Factors 2	(3 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)
General Education		(6 UOC)

Plus 12 units of credit from:

AVEN2220	Aviation Engineering Experimentation 1	(3 UOC)
AVEN2910	Aviation Technologies 1	(3 UOC)
AVEN2930	Aviation Technologies 3	(3 UOC)
AVIA2800	Management of General Aviation	(3 UOC)
SESC2580	Risk Management 2	(3 UOC)

Plus further electives (totalling 6 UOC)

Stage 3

AVEN3220	Aviation Engineering Experimentation 2	(3 UOC)
AVIA3201	Airline Resource Management	(6 UOC)
AVIA3300	Air Traffic Management	(3 UOC)
AVIA3710	Aviation Safety Management 2	(6 UOC)

Plus **one** of the following AVIA courses:

AVIA3004	Advanced Flying Training	(24 UOC)
AVIA3101	Airline Management	(6 UOC)

General Education

(6 UOC)

Additional UOC for a Stage 3 total of 48 from:

AVEN3230	Aviation Systems and Avionics	(3 UOC)
AVEN3420	Aircraft Maintenance	(3 UOC)
AVEN3610	Aerodynamics, Stability and Control	(3 UOC)
AVEN3710	Aircraft Propulsion	(3 UOC)
AVIA3800	Management of Regional Airlines	(3 UOC)

AVIA3851	Airport Management 2	(6 UOC)
PHYS2810	Atmospheric Physics	(3 UOC)

Stage 4 (Honours)

One of the following:

AVIA4001	Aviation Honours - Full Time	(24 UOC)
AVIA4002	Aviation Honours - Part Time	(48 UOC)

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

A total of 144 units of credit including 12 units of credit of General Education (see above) are required for the completion of the Bachelor of Aviation (3 year degree).

3981 Bachelor of Aviation (*Management stream*)

BAv

Typical Duration

3 years

Minimum UOC for Award

144 units of credit

Typical UOC per Session

24 units of credit

Program Description

The degree of Bachelor of Aviation is offered by the Faculty of Science with input from the Faculty of Engineering.

The aim of this program is to provide an opportunity for students to prepare for a career in the aviation industry. Program 3981 is a Managerial stream which prepares students more specifically for careers in the managerial sector of the aviation industry. A Flying stream, which incorporates flight training, is also available - please refer to program 3980 in this Online Handbook.

Both streams consist of core courses selected from the Faculties offering the program together with a range of options. The Managerial stream offers a selection of courses designed to provide students with a broad base of knowledge in managing the operational aspects of the aviation industry.

Program Objectives and Learning Outcomes

This program aims to prepare students for a career in the managerial sector of the aviation industry.

Program Structure

Stage 1

AVEN1310	Basic Mechanics	(3 UOC)
AVEN1910	Introduction to Aircraft Engineering	(3 UOC)
AVIA1321	Fundamentals of Aviation	(6 UOC)
AVIA1810	Aviation Security	(3 UOC)
AVIA1850	Airport Management 1	(3 UOC)
AVIA1900	Aviation Economics	(3 UOC)
MATH1031	Mathematics for Life Sciences	(6 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)
SESC1580	Risk Management 1	(3 UOC)

Plus 6 UOC from:

ECON1101	Microeconomics 1	(6 UOC)
PHYS1149	Physics 1A (Aviation)	(6 UOC)
PHYS1211	Energy and Environmental Physics	(6 UOC)

Stage 2

AVEN2920	Aviation Technologies 2	(3 UOC)
AVIA1700	Aviation Safety Management 1	(3 UOC)
AVIA2110	Aviation Human Factors 1	(3 UOC)
AVIA2210	Aviation Human Factors 2	(3 UOC)
AVIA2400	Aviation Regulations 1	(3 UOC)
General Education		(6 UOC)
Elective courses		(6 UOC)

Plus 21 UOC from:

AVEN2220	Aviation Engineering Experimentation 1	(3 UOC)
AVEN2910	Aviation Technologies 1	(3 UOC)

AVEN2930	Aviation Technologies 3	(3 UOC)
AVIA2500	Airline Marketing	(3 UOC)
AVIA2800	Management of General Aviation	(3 UOC)
AVIA3600	Simulations Applications	(3 UOC)
MGMT2721	Managing People	(6 UOC)
PHYS2850	Environmental Acoustics	(3 UOC)
SESC2580	Risk Management 2	(3 UOC)

Stage 3

AVEN3220	Aviation Engineering Experimentation 2	(3 UOC)
AVIA3101	Airline Management	(6 UOC)
AVIA3201	Airline Resource Management	(6 UOC)
AVIA3710	Aviation Safety Management 2	(6 UOC)

General Education

Electives

Plus 18 UOC from:

AVEN3230	Aviation Systems and Avionics	(3 UOC)
AVEN3420	Aircraft Maintenance	(3 UOC)
AVEN3610	Aerodynamics, Stability and Control	(3 UOC)
AVEN3710	Aircraft Propulsion	(3 UOC)
AVEN3930	Aircraft Evaluation and Design Appraisal	(3 UOC)
AVIA3300	Air Traffic Management	(3 UOC)
AVIA3400	Aviation Regulations 2	(3 UOC)
AVIA3800	Management of Regional Airlines	(3 UOC)
AVIA3851	Airport Management 2	(6 UOC)
PHYS2810	Atmospheric Physics	(3 UOC)

Stage 4 (Honours)

Choose one of the following:

AVIA4001	Aviation Honours - Full Time	(48 UOC)
(24 UOC per session over two sessions)		
AVIA4002	Aviation Honours - Part Time	(48 UOC)

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

A total of 144 units of credit including 12 units of credit of General Education (see below) are required for the completion of the Bachelor of Aviation (3 year degree).

3052 Biotechnology**Bachelor of Science BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Biotechnology can be defined as the use of various biological processes to make products and perform services. In biotechnology, living cells and biochemical macromolecules such as proteins, DNA and RNA are applied in a rapidly expanding range of activities of direct benefit to society. Biotechnology is used for the production of pharmaceuticals, food and industrial chemicals, in the development of improved crops and livestock for farming, for environmental clean-up, and in forensics. Modern biotechnology makes practical use of the most recent scientific advances in areas such as molecular genetics and molecular cell biology.

The development of recombinant DNA technology has resulted in the ability to create, modify and improve industrial organisms and to produce large quantities of any useful protein. Based on this technology, biopharmaceuticals including hormones, vaccines, anti-hypertensive agents, anti-inflammatory agents and new therapies for the treatment of cancer are being developed with the potential to revolutionise medicine. The sequencing of the human genome and the rapid emergence of high-throughput genomic and proteomic techniques is resulting in a surge of new drug targets. Translation of this advanced knowledge into useful therapies and improved medical practices requires the application of biotechnology.

Microorganisms and viruses are being modified for use in controlling plant and animal diseases and pests. Diagnostic kits are being developed for

use in forensic science and in product identification and quality control. Genetic improvements in agriculture, plants and animals are becoming a reality, as is the control of inborn genetic disorders in humans. The ability to treat diseased and injured organs with replacement cells and tissues generated outside of the body is advancing rapidly.

Bioprocesses are also used for environmental remediation, for the extraction of minerals from low-grade ores, and for the development of novel processes to treat waste and degrade recalcitrant molecules. Environmental biotechnology is an area of vital importance for our increasingly polluted planet.

The future for expansion in all the above areas is immense. Our ability to cope with many medical, environmental, agricultural and manufacturing problems in the 21st century will depend heavily on advances in biotechnology.

This program leads to the award of a Bachelor of Science Degree over four years full-time study, with Honours for students who perform with merit.

Program Objectives and Learning Outcomes

The Biotechnology program aims to provide a comprehensive education in all aspects of modern biotechnology.

Program Structure**Stage 1**

BIOS1201	Molecules, Cells and Genes	(6 UOC)
BIOT1011	Introductory Biotechnology	(6 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1031	Mathematics for Life Sciences	(6 UOC)
MATH1041	Statistics for Life and Social Sciences	(6 UOC)

Electives courses totalling 12 UOC recommended.

Note: One of the following courses/combinations may be substituted for MATH1031 and MATH1041

MATH1011	General Mathematics 1B	(6 UOC)
or		
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
or		
MATH1141	Higher Mathematics 1A	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

Stage 2

BIOS2101	Principles of Biochemistry (Advanced)	(6 UOC)
BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
BIOS2021	Genetics	(6 UOC)
or		
BIOS2621	Genetics (Advanced Level)	(6 UOC)
MICR2011	Microbiology 1	(6 UOC)
MICR2201	Fundamentals of Microbiology and Immunology	(6 UOC)
General Education courses		(6 UOC)

PLUS 12 UOC from:

BIOS2011	Evolutionary and Physiological Ecology	(6 UOC)
CHEM2021	Organic Chemistry	(6 UOC)
CHEM2041	Chemical and Spectroscopic Analysis	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)

Stage 3

BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
BIOT3011	Biotechnology A	(6 UOC)
BIOT3021	Biotechnology B	(6 UOC)
BIOT3061	Biopharmaceuticals	(6 UOC)
General Education courses		(6 UOC)

PLUS one of the following MICR courses:

MICR3041	Immunology 1	(6 UOC)
MICR3641	Immunology 1 (Advanced)	(6 UOC)

PLUS an additional 12 UOC to be selected from the following:

BIOC3111	Molecular Biology of Proteins	(6 UOC)
BIOC3271	Molecular Cell Biology	(6 UOC)
BIOC3281	Recombinant DNA Techniques and Eukaryotic Molecular Biology	(6 UOC)
BIOT3081	Environmental Biotechnology	(6 UOC)
MICR3021	Microbial Genetics*	(6 UOC)

MICR3051	Immunology 2	(6 UOC)
MICR3071	Environmental Microbiology	(6 UOC)

***Note:** MICR3621 Microbial Genetics (Advanced) may be substituted for MICR3021.

Stage 4

BIOT3071	Commercial Biotechnology	(6 UOC)
BIOT3091	Professional Issues in Biotechnology	(6 UOC)
BIOT4053	Research Project - Biotechnology	(36 UOC)

(18 UOC per session over two sessions)

Note: Enrol in BIOT4053 for both sessions through the School Office.

General Education Requirements

The University requires all students to complete a coherent sequence of General Education courses. The General Education Program is an integral part of the BSc Biotechnology course and gives students the opportunity to address some of the key questions they will face as individuals, citizens and professionals. A total of 12 units of credit in General Education course(s) is required.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

Progression and Exclusion

Students whose performance is unsatisfactory will be notified in writing and asked to show at the end of the academic year why they should remain in their course of study. Any student who fails a course twice, or is deemed to be making unsatisfactory progress, will be considered as having poor academic standing.

Unsatisfactory progress may include:

- failure to achieve an average of 65 or higher in courses attempted in an academic year;
- failing to pass courses totalling at least 24 units of credit in one year;
- failing to complete the requirements for Stage 1 of the program in the first two years of study.

Students not on good academic standing will be notified by the University or Faculty in writing. Notified students will be assessed in accordance with the University's procedures. Failure to respond accordingly can result in exclusion from a course, the program, or transfer to the Science and Mathematics program (3970), provided that the progression requirements in that course have been met. Also see the section on progression and exclusion ('Restrictions on Students Re-enrolling') in the Student Guide.

Progression to Stage 4 Honours

Progression to Stage 4 is subject to academic performance. Students seeking to enrol in a Stage 4 Honours program are required to have the approval of the Head of School and normally will be required:

- to have completed the requirements for Stages 1, 2 and 3 of the program and to have completed all General Education courses
- to have attained an average of 65 or higher in each Stage of the program.

Students who do not attain an average of 65 or higher in Stage 3 of the program are normally required to transfer to the Science and Mathematics program (3970) and take out the BSc award at Pass level.

Note: Please refer to Program Structure above for rules relating to program requirements

Career Outcomes

Graduates in Biotechnology will be able to find employment in industries and other organisations involved with drug development, biopharmaceutical production, food processing as well as agricultural and environmental biotechnology.

3135 Materials Science and Engineering

Bachelor of Engineering BE

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The field of Materials Science and Engineering offers unlimited possibilities for innovation and development. Attention is being focused on developing and processing metals, ceramics, polymers and composites with improved properties.

The activities of the materials engineer range from materials production, including their extraction from ores and their refining, to the design, development, processing and recycling of materials for use in aerospace, transportation, electronics, energy conversion and biomedical systems.

Advanced materials can provide a major competitive advantage in virtually every part of a country's manufacturing industry. Because Australia is a country rich in minerals, materials science has been designated as a priority area for research and development. Examples of recent and significant developments include the emergence of environmentally friendly and economical metal processing methods, advanced surface coatings, biomedical materials, electrical ceramics, engineering polymers, and advanced composites.

The School of Materials Science and Engineering provides education and training for students to prepare them for a significant and important career in the materials and other industries.

The School of Materials Science and Engineering is in a good position to provide the increased numbers of graduates necessary for development of these new initiatives in materials. It is the only school in Australia that offers professional courses in ceramic engineering, metallurgical engineering and materials engineering as well as providing postgraduate specialisation in these fields.

The School is extremely well equipped with a wide range of advanced computing, thermal analysis, mechanical testing, X-ray and optical and electron microscopy facilities.

The School offers a four-year full-time BE program (3135) with four different plans, and related five-year full-time combined degree program leading to BE/MBiomedE (3138). In addition, six year part-time BSc(Tech) programs are also offered in Ceramics (3030) and Metallurgy (3130).

Program Structure

Plans under program 3135 all of which lead to the award of Bachelor of Engineering (BE) provide appropriate preparation for a professional Physical Metallurgical Engineer (plan MATSE13135), Process Metallurgical Engineer (plan MATSG13135), Materials Engineer (plan MATSH13135) and Ceramic Engineer (plan MATSJ13135). The first two years of all plans are identical and the third and fourth years contain a number of common courses. Students can change their selection among the study plans up to the end of Session 1 of the third year.

Each study plan provides a range of electives in the particular study specialisation concerned. In addition, a limited number of electives can be chosen from other plans.

Concurrent programs are also available with Bachelor of Engineering/Masters programs in either Commerce (3128) or Biomedical Engineering (3138). To enter program 3128, students start in BE program 3135 and study their academic plan to the end of third year. They then transfer in year 4 to BE Program 3128 and in their 5th year, study under the Master of Commerce program 8400 to obtain the award of Bachelor of Engineering/Master of Commerce (BEMCom). Similarly, in program 3138, students can study an academic plan within the Bachelor of Engineering program 3135 and then, in the 5th year, study under the Master of Biomedical Engineering Program 3749 to obtain the award of Bachelor of Engineering/Master of Biomedical Engineering (BE/MBiomedE).

The following structure is applicable to all plans within the Bachelor of Engineering Single Degree Program

Plan **MATSE13135** BE in **Physical Metallurgy**
 Plan **MATSG13135** BE in **Process Metallurgy**
 Plan **MATSH13135** BE in **Materials Engineering**
 Plan **MATSJ13135** BE in **Ceramic Engineering**

Stage 1 of all plans

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MATS1021	Computing in Materials Science	(3 UOC)
MATS1111	Materials Science 1	(3 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)
MECH0440	Engineering Statics	(3 UOC)
PHYS1121	Physics 1A	(6 UOC)
PHYS1221	Physics 1B	(6 UOC)

Stage 2 of all plans

CHEM2718	Physical Chemistry for Materials Science and Engineering	(3 UOC)
MATH2049	Mathematics and Statistics for Materials Science A	(3 UOC)
MATH2059	Mathematics for Materials Science B	(3 UOC)
MATS1002	Microstructure Analysis	(3 UOC)
MATS1092	Materials and Design 1	(3 UOC)
MATS1112	Phase Equilibria	(3 UOC)
MATS1142	Crystallography and X-Ray Diffraction	(3 UOC)
MATS1152	Materials Engineering 1B	(6 UOC)
MATS1172	Physical Properties of Materials	(3 UOC)
MATS1232	Materials Engineering 1A	(3 UOC)
MATS1262	Mechanical Properties of Materials	(6 UOC)
MATS1282	Thermodynamic Materials	(6 UOC)
General Education course		(3 UOC)

Stage 3 of all plans

MATS1013	Diffusion and Kinetics	(3 UOC)
MATS1244	Materials Industry Management A	(6 UOC)
MATS2013	Ceramic Materials	(3 UOC)
MATS3443	Polymer Science and Engineering	(3 UOC)
MATS4013	Physical Metallurgy	(3 UOC)
MATS5013	Materials Processing	(6 UOC)
MATS5113	Materials Engineering Laboratory	(3 UOC)
MATS5323	Modelling in Materials Engineering 1	(3 UOC)
Plus Professional Electives totalling		12 UOC
General Education courses		(6 UOC)

Stage 4 of all plans

MATS1343	Materials Industry Management B	(3 UOC)
MATS1354	Design Project	(3 UOC)
MATS1464	Professional Communication and Presentation	(3 UOC)
MATS3624	Materials Engineering Project	(18 UOC)
(9 UOC per session over two sessions)		
Plus Professional Electives totalling		18 UOC
or		
MATS3724	Materials Engineering Project	(24 UOC)
(12 UOC per session over two sessions)		
Plus Professional Electives totalling		12 UOC
General Education courses		(3 UOC)

Elective Components (Stage 4)

The following courses have particular objectives, but specific topics are chosen by students for study and research.

MATS1244	Materials Industry Management A	(6 UOC)
MATS1354	Design Project	(3 UOC)
MATS1464	Professional Communication and Presentation	(3 UOC)
MATS3624	Materials Engineering Project	(18 UOC)
(9 UOC per session over two sessions)		
MATS3724	Materials Engineering Projects	(24 UOC)
(12 UOC per session over two sessions)		

Physical Metallurgy - Plan MATSE13135

The Physical Metallurgy plan is designed to produce graduates with training appropriate to both the metal and product manufacturing industries. The profession is very broad and includes careers in metal manufacturing companies, product manufacturing companies (e.g. white goods, automotive, aircraft), utilities, airline overhaul and maintenance operations, consulting companies and research organisations. Graduates may be employed in production, technical control and development, quality assurance, technical marketing and management. Physical Metallurgy is introduced comprehensively in Stages 3 and 4 by a number of professional electives. Students also undertake a materials design project and a substantial thesis project. Students may complete the first one or two years of their degree at their local university engineering school and then transfer with advanced standing to UNSW.

Physical Metallurgy Professional Electives:

MATS1214	Welding and Other Joining Processes	(3 UOC)
MATS1414	Surface Treatment and Wear	(3 UOC)
MATS3064	Composite Materials	(3 UOC)
MATS4064	Thermomechanical Processing	(3 UOC)
MATS4084	Specialty Alloys	(3 UOC)
MATS5424	Modelling in Materials Engineering 2	(3 UOC)
NANO3420	Fabrication of Nanostructured Devices	(3 UOC)

Process Metallurgy - Plan MATSG13135

The Process Metallurgy plan is designed to produce graduates with training appropriate to the primary metallurgy industry. The profession is very broad and affords opportunities for involvement in many specialist

activities in production, technical control or development, in metal or mineral producing industries.

Process Metallurgical Engineering is introduced in Stages 3 and 4 by a number of professional electives and a thesis project. During the program, visits are made to various metallurgical works and students are required to submit reports on some of these. Students may complete the first one or two years of their degree at their local university engineering school and then transfer with advanced standing to UNSW.

Process Metallurgy Professional Electives:

FUEL0040	Fuel Engineering for Materials Processing	(3 UOC)
INDC3070	Instrumentation and Process Control	(3 UOC)
MAT5394	Pollution Control in Materials Processing	(3 UOC)
MATS5424	Modelling in Materials Engineering 2	(3 UOC)
MATS5524	Pyrometallurgy 2 – Casting	(3 UOC)
MINE3800	Mineral Processing	(3 UOC)

Materials Engineering - Plan MATSH13135

The Materials Engineering plan provides a versatile, comprehensive coverage of areas involving: a) the conception and application of properties of materials for use in engineering, structural and specialty needs necessary in the design and development of specific components, b) supervision of manufacturing, c) evaluation and certification of specifications and characteristics, d) production of new, novel and value-added products, e) research, and f) general engineering and project management. The range of Professional Electives and selection of Technical Electives in Years 3 and 4 provide a direction appropriate to the needs of the Australian industry, and to the specific interests of students, together with a degree of flexibility if required. Typical fields which may be encompassed by the plan include steel and non-ferrous metals/alloys production, polymers and composites industry, building materials, civil engineering applications, transport, electrical/electronic industry, biomaterials/biodevices, Australian defence needs: Army, Navy, Airforce, plus the national research laboratories. Due emphasis is placed on collaborating with other appropriate fields of engineering and science disciplines.

Materials Engineering Professional Electives:

MATS1414	Surface Treatment and Wear	(3 UOC)
MATS2294	Mech. And Thermal Properties of Ceramics	(3 UOC)
MATS2314	Glass-Based Ceramics	(3 UOC)
MATS3064	Composite Materials	(3 UOC)
MATS3574	Polymer Engineering 2	(3 UOC)
MATS5424	Modelling in Materials Engineering 2	(3 UOC)
NANO3420	Fabrication of Nanostructured Devices	(3 UOC)

Ceramic Engineering - Plan MATSJ13135

UNSW offers the only degree specialisation in Ceramic Engineering in Australia. The Ceramic Engineering plan is designed to produce graduates with expertise appropriate to the ceramic manufacturing industries, which include structural ceramics, advanced engineering ceramics, electrical ceramics, whitewares, glass manufacturing and refractories. Graduates are employed in a diverse range of areas including production, research and technical development, quality assurance, technical marketing, consulting and management. In addition to recognition of the degree by the Institution of Engineers Australia, graduates in Ceramic Engineering are also eligible for membership of the Institute of Ceramics of Great Britain, the Royal Australian Chemical Institute and the National Institute of Ceramic Engineers USA.

Ceramic Engineering is introduced comprehensively in Stages 3 and 4 of the program by a number of professional electives which include visits to various ceramic manufacturing plants, a design project and a thesis research project. Students may complete the first one or two years of their degree at their local university engineering school and then transfer with advanced standing to UNSW.

Ceramic Engineering Professional Electives:

FUEL0040	Fuel Engineering for Materials Processing	(3 UOC)
MATS2203	Physico-Chemical Ceramics Laboratory	(3 UOC)
MATS2263	Sintering of Ceramics	(3 UOC)
MATS2294	Mech. And Thermal Properties of Ceramics	(3 UOC)
MATS2314	Glass-Based Ceramics	(3 UOC)
MATS5394	Pollution Control in Materials Processing	(3 UOC)
MATS5424	Modelling in Materials Engineering 2	(3 UOC)
NANO3420	Fabrication of Nanostructured Devices	(3 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. This is 12 UOC, usually taken in second and third year studies.

For further information, please refer to the General Education section in this Handbook.

Academic Rules

Please refer to Program Structure and the School of Materials Science & Engineering for the academic requirements relating to this program.

Industrial Experience Requirement

All students are required to have gained at least 12 weeks of approved industrial experience before graduation and to have submitted satisfactory reports on such work. Industrial experience is usually obtained during a long vacation at the end of stages 2 and 3.

Professional Recognition

The Institution of Engineers Australia recognises the degree of BE in any of the 4 undergraduate plans as meeting the examination requirements for admission to graduate and corporate membership. Similarly, substantial or complete recognition is accorded to the BE degree programs by overseas engineering institutions.

Graduates in Ceramic Engineering are also eligible for membership of the Institute of Ceramics of Great Britain, the Royal Australian Chemical Institute and the National Institute of Ceramic Engineers USA.

3030 Ceramics

Bachelor of Science (Technology) BSc(Tech)

Typical Duration

6 years part-time

Minimum UOC for Award

144 units of credit

Typical UOC per Session

18 units of credit

Program Description

Please note: This program is currently under review. For confirmation of program details, please contact the School of Materials Science.

Program 3030 is designed for students who are employed in the ceramics industry. It extends over six part-time years of study. The courses in Stages 3, 4, 5 and 6 normally are available only at daytime classes and one day or more of release from industry per week may be required.

The program leads to the Bachelor of Science (Technology) award. It covers the same courses as the first three years of the corresponding full-time BE program 3135. The first four years of study correspond to the first two years of program 3135. Stages 5 and 6 are the same as the third year of the 3135 program ceramic engineering plan.

Students are required to complete an approved program of industrial training of not less than twelve months prior to the award of the degree. Industrial training normally should be completed concurrently with attendance of the program, but with approval of the Head of School may be completed after completion of the prescribed course of study.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in the field of Ceramics.

Program Structure

Stage 1

MATH1131	Mathematics 1A
MATH1231	Mathematics 1B
PHYS1121	Physics 1A
PHYS1221	Physics 1B
Total	24 UOC

Stage 2

CHEM1011	Fundamentals of Chemistry 1A
CHEM1021	Fundamentals of Chemistry 1B
MATS1111	Materials Science 1
MATS1021	Computing in Materials Science
MECH0130	Engineering Drawing & Solid Modelling
MECH0440	Engineering Statics
Total	24 UOC

Stage 3

CHEM2718	Physical Chemistry for Materials Science and Engineering
MATH2049	Mathematics and Statistics for Materials Science A

MATH2059	Mathematics for Materials Science B
MATS1092	Materials and Design 1
MATS1172	Physical Properties of Materials
MATS1282	Thermodynamic Materials
General Education (3 UOC)	
Total	24 UOC

Stage 4

MATS1152	Materials Engineering 1B
MATS1232	Materials Engineering 1A
MATS1002	Microstructure Analysis
MATS1142	Crystallography and X-Ray Diffraction
MATS1262	Mechanical Properties of Materials
General Education (3 UOC)	
Total	24 UOC

Stage 5

MATS1013	Diffusion and Kinetics
MATS1112	Phase Equilibria
MATS2013	Ceramic Materials
MATS3443	Polymer Science and Engineering
Professional Electives (9 UOC)*	
General Education (3 UOC)	
Total	24 UOC

Stage 6

MATS4013	Physical Metallurgy
MATS5013	Materials Processing
MATS5323	Modelling in Materials Engineering 1
Professional Electives (9 UOC)*	
General Education (3 UOC)	
Total	24 UOC

* Professional electives as listed for program 3135 Ceramic Engineering plan

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

Please refer to Program Structure and contact the School of Materials Science & Engineering for the Academic Requirements relating to this program.

3130 Metallurgy

Bachelor of Science (Technology) BSc(Tech)

Typical Duration

6 years part-time

Minimum UOC for Award

144 units of credit

Typical UOC per Session

18 units of credit

Program Description

Please note: This program is currently under review. For confirmation of program requirements and availability, please contact the School of Materials Science.

Program 3130 is designed for students who are employed in the metallurgical industry.

The program extends over six part-time years of study. The courses in Stages 3, 4, 5 and 6 normally are available only at daytime classes and one day or more of release from industry per week may be required.

Students are required to complete an approved program of industrial training of not less than twelve months prior to the award of the degree. Industrial training normally should be completed concurrently with attendance of the program, but with approval of the Head of School may be completed after completion of the prescribed course of study.

Program Structure

Stage 1

MATH1131	Mathematics 1A
MATH1231	Mathematics 1B
PHYS1121	Physics 1A
PHYS1221	Physics 1B
Total	24 UOC

Stage 2

CHEM1011	Fundamentals of Chemistry 1A
CHEM1021	Fundamentals of Chemistry 1B

MATS1021	Computing in Materials Science
MATS1111	Materials Science 1
MECH0130	Engineering Drawing & Solid Modelling
MECH0440	Engineering Statics
Total	24 UOC

Stage 3

CHEM2718	Physical Chemistry for Materials Science and Engineering
MATH2049	Mathematics and Statistics for Materials Science A
MATH2059	Mathematics for Materials Science B
MATS1092	Materials and Design 1
MATS1172	Physical Properties of Materials
MATS1282	Thermodynamic Materials
General Education (3 UOC)	
Total	24 UOC

Stage 4

MATS1152	Materials Engineering 1B
MATS1232	Materials Engineering 1A
MATS1002	Microstructure Analysis
MATS1142	Crystallography and X-Ray Diffraction
MATS1262	Mechanical Properties of Materials
General Education (3 UOC)	
Total	24 UOC

Stage 5

MATS1013	Diffusion and Kinetics
MATS1112	Phase Equilibria
MATS2013	Ceramic Materials
MATS3443	Polymer Science and Engineering
Professional Electives (9 UOC)**	
General Education (3 UOC)	
Total	24 UOC

Stage 6

MATS4013	Physical Metallurgy
MATS5013	Materials Processing
MATS5323	Modelling in Materials Engineering 1
Professional Electives (9 UOC)**	
General Education (3 UOC)	
Total	24 UOC

**Professional electives as listed for program 3135, either in the Physical Metallurgy plan, or in the Process Metallurgy plan.

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

Please refer to Program Structure and contact the School of Materials Science & Engineering for the academic requirements relating to this program.

3138 Materials Science and Engineering/ Master of Biomedical Engineering

Bachelor of Engineering Master of Biomedical Engineering BE MBIomedE

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Please note: This program is currently under review. For confirmation of program requirements and availability, please contact the School of Materials Science.

An increasing number of materials engineers in Australia and overseas are involved in the development, processing, and application of materials used in many areas of biomedical engineering including orthopaedics, dental and maxillofacial implants, artificial vascular materials, controlled drug delivery, prosthetics and orthotics, and device housings. In many

areas of medical technology, a concurrent study of materials and biomedical engineering form a logical and useful training. The objectives of the concurrent degree program will prepare materials engineers to work in these areas of biomedical technology like many of their overseas counterparts.

The five-year concurrent degree program consisting of a Bachelor of Engineering (in Process Metallurgy, Physical Metallurgy, Ceramic Engineering or Materials Science) and a Master of Biomedical Engineering (BE MBIomedE) is specifically designed to cater for students wishing to pursue a career in biomedical engineering through the technical base of materials science and engineering. The concurrent BE/MBIomedE program is 240 units of credit (5 years full-time) by allowing 18 units of credit of graduate level MBIomedE courses to substitute for elective courses in the BE and one undergraduate BE elective to substitute for a MBIomedE elective. This overlap arrangement is only available to students who complete the BE MBIomedE program. Students who discontinue the BE MBIomedE program to complete the BE program only will have to complete the normal 192 units of credit BE program but may be given credit for some of the BIOM courses completed. All students are required to have gained at least 12 weeks of approved industrial experience before graduation and to have submitted satisfactory reports on such work. Industrial experience is usually obtained during a long vacation at the end of years 2 and 3.

The Institution of Engineers, Australia recognises the Bachelor of Engineering components of the BE MBIomedE programs as meeting the examination requirements for admission to graduate and corporate membership. Furthermore, examination requirements are met for the membership of the Institution's College of Biomedical Engineering. The degree is accorded substantial or complete recognition by overseas engineering institutions.

Program Structure

The Bachelor of Engineering component of the program requires students to undertake study in one of the following four plans:

Ceramic Engineering - plan code **MATSJ13138**

Materials Engineering - plan code **MATSH13138**

Physical Metallurgy - plan code **MATSE13138**

Process Metallurgy - plan code **MATSG13138**

In addition, a number of electives can be chosen from other plans. The first year of study is common to all plans. Specialisation occurs in the later years of study, though some courses are still common to all plans. Only the courses that are common to every plan are set out below. A student's plan would determine the composition of the rest of each stage of their program - i.e. their Technical Electives and Professional Electives.

Academic Plans

The professional and technical electives that define the Physical Metallurgy, Process Metallurgy, Materials Engineering and Ceramic Engineering academic plans in the BE/MBIomedE program are the same as those specified for the corresponding academic plans in BE program 3135.

Students can change their selection of study plans up to the end of Session 1 of the third year. Courses pertaining to the MBIomedE component of the program are done in each of the 5 stages of the program.

(Note: 'Year 1, 2, 3' etc represents Stage 1, 2, 3 etc of the program, as it would be taken in a normal course of full-time study)

Stage 1 all plans

BIOM1001	Professional Biomedical Studies	(3 UOC)
BIOM9010	Biomedical Engineering Practice	(3 UOC)
CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
MATH1231	Mathematics 1B	(6 UOC)
MATS1021	Computing in Materials Science	(3 UOC)
MATS1111	Materials Science 1	(3 UOC)
PHYS1121	Physics 1A	(6 UOC)
PHYS1221	Physics 1B	(6 UOC)

Stage 2 all plans

BIOM9420	Clinical Laboratory Science	(6 UOC)
CHEM2718	Physical Chemistry for Materials Sci and Engineering	(3 UOC)
MATH2049	Mathematics and Statistics for Materials Science A	(3 UOC)
MATH2059	Mathematics for Materials Science B	(3 UOC)
MATS1112	Phase Equilibria	(3 UOC)
MATS1142	Crystallography and X-Ray Diffraction	(3 UOC)

MATS1152	Materials Engineering 1B	(6 UOC)
MATS1232	Materials Engineering 1A	(3 UOC)
MATS1262	Mechanical Properties of Materials	(6 UOC)
MATS1282	Thermodynamics of Materials	(6 UOC)
MECH0130	Engineering Drawing and Solid Modelling	(3 UOC)
MECH0440	Engineering Statics	(3 UOC)

Stage 3

ANAT2511	Fundamentals of Anatomy	(6 UOC)
MATS1002	Microstructure Analysis	(3 UOC)
MATS1013	Diffusion and Kinetics	(3 UOC)
MATS1172	Physical Properties of Materials	(3 UOC)
MATS2013	Ceramic Materials	(3 UOC)
MATS3443	Polymer Science and Engineering	(3 UOC)
MATS4013	Physical Metallurgy	(3 UOC)
MATS5013	Materials Processing	(6 UOC)
MATS5113	Materials Engineering Laboratory	(3 UOC)
MATS5323	Modelling in Materials Engineering 1	(3 UOC)
Professional Electives		(9 UOC)
Technical Electives		(3 UOC)

Stage 4

MATS3524	Materials Engineering Project (12 UOC)	(6 UOC per session over two sessions)
<i>or</i>		
BIOM5910	Thesis Part A	(6 UOC)
<i>and</i>		
BIOM5911	Thesis Part B	(6 UOC)
MATS1092	Materials and Design 1	(3 UOC)
MATS1354	Design Project	(3 UOC)
MATS1464	Professional Communication and Presentation	(3 UOC)
PHPH2121	Principles of Physiology A	(6 UOC)
PHPH2221	Principles of Physiology B	(6 UOC)
Professional Electives		(9 UOC)
General Education Courses		(3 UOC)

Elective Components

The following components have particular objectives, but specific topics are chosen by students for study and research.

MATS1354	Design Project	(3 UOC)
MATS1464	Professional Communication and Presentation	(3 UOC)

Stage 5

BIOM9332	Biocompatibility	(6 UOC)
BIOM9410	Regulatory Requirements of Biomedical Technology	(6 UOC)
BIOM9913	Project Report	(12 UOC)
MATS1343	Materials Industry Management B	(3 UOC)
Biomedical Engineering Electives		(18 UOC)

Elective Components

The following course has particular objectives, but specific topics are chosen by students for study and research.

MATS1244	Materials Industry Management A	(6 UOC)

General Education Requirements

Students in this program must also satisfy the General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

Please refer to Program Structure and contact the School of Materials Science & Engineering for the academic requirements relating to this program.

3617 Nanotechnology**Bachelor of Science BSc****Typical Duration**

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This program in Nanotechnology offers a comprehensive education in this emerging field, which represents an important development in the

evolution of scientific understanding, with profound implications for the new economy.

Nanotechnology provides the potential to create new manufacturing sectors from our ability to observe, characterise and manipulate the atomic and molecular structure of materials which form the basis of the bio-, communications, information and environmental technologies.

This program will lead to the award of a Bachelor of Science in Nanotechnology over four years of full-time study, with Honours for students who perform with merit. At present, the principal entry point into this degree will be at first year level. Students will normally be expected to complete each stage before proceeding to the next stage. A total of 192 units of credit must be completed for the award of this degree.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a comprehensive knowledge base in the field of nanotechnology.

Program Structure**Stage 1**

BIOS1201	Molecules, Cells and Genes	(6 UOC)
MATS9520	Engineering Materials	(3 UOC)
NANO1001	Nanotechnology 1	(3 UOC)

AND one of the following courses:

CHEM1011	Fundamentals of Chemistry 1A	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)

AND one of the following courses:

CHEM1021	Fundamentals of Chemistry 1B	(6 UOC)
CHEM1041	Higher Chemistry 1D	(6 UOC)

AND one of the following courses:

MATH1131	Mathematics 1A	(6 UOC)
MATH1141	Higher Mathematics 1A	(6 UOC)

AND one of the following courses:

MATH1231	Mathematics 1B	(6 UOC)
MATH1241	Higher Mathematics 1B	(6 UOC)

AND one of the following courses:

PHYS1121	Physics 1A	(6 UOC)
PHYS1131	Higher Physics 1A	(6 UOC)

AND one of the following courses:

PHYS1221	Physics 1B	(6 UOC)
PHYS1231	Higher Physics 1B	(6 UOC)

Stage 2

CHEM2041	Chemical and Spectroscopic Analysis	(6 UOC)
CHEM2828	Organic and Inorganic Chemistry for Nanotechnology	(6 UOC)
MATS1112	Phase Equilibria	(3 UOC)
MATS1142	Crystallography and X-Ray Diffraction	(3 UOC)
NANO2002	Nanotechnology 2	(3 UOC)
PHYS2020	Computational Physics	(3 UOC)
PHYS2030	Laboratory A	(3 UOC)
PHYS2040	Quantum Physics	(3 UOC)
PHYS2410	Biophysics 1	(3 UOC)
PHYS3310	Physics of Solid State Devices	(3 UOC)
General Education		(6 UOC)

AND one of the following courses:

BIOC2201	Principles of Molecular Biology (Advanced)	(6 UOC)
BIOC2291	Fundamentals of Molecular Biology	(6 UOC)

Stage 3

BIOC3121	Molecular Biology of Nucleic Acids	(6 UOC)
NANO3003	Nanotechnology 3	(3 UOC)
NANO3410	Chemistry of Surfaces	(3 UOC)
NANO3420	Fabrication of Nanostructured Devices	(3 UOC)
PHYS3080	Solid State Physics	(3 UOC)
General Education		(6 UOC)
PLUS electives totalling 24 UOC		

Recommended electives are as follows:

BIOC3111	Molecular Biology of Proteins	(6 UOC)
CHEM3011	Physical Chemistry	(6 UOC)
CHEM3041	Analytical Chemistry	(6 UOC)
CHEM3101	Project Laboratory in Chemistry	(6 UOC)
MATS1002	Microstructure Analysis	(3 UOC)
MATS1013	Diffusion and Kinetics	(3 UOC)
MATS1262	Mechanical Properties of Materials	(6 UOC)

MATS1343	Materials Industry Management B	(3 UOC)
MATS4023	Phase Transformations	(3 UOC)
MATS4133	Deformation and Strengthening Mechanisms	(3 UOC)
MATS4333	Fracture Mechanics	(3 UOC)
MICR2201	Fundamentals of Microbiology and Immunology	(6 UOC)
NANO3440	Biosensors and Biodevices for Nanotechnology	(3 UOC)
PHYS2630	Electronics	(3 UOC)
PHYS3040	Experimental Physics A1	(3 UOC)
PHYS3320	Topics in Condensed Matter Physics	(3 UOC)
PHYS3410	Biophysics 2	(3 UOC)
POLY3011	Polymer Science - Theory	(3 UOC)
POLY3012	Polymer Science - Practice	(3 UOC)

Stage 4

MATS1464	Professional Communication and Presentation	(3 UOC)
NANO4004	Nanotechnology Project	(18 UOC)
PLUS electives totalling 9 UOC		

Recommended electives are as follows:

BIOC3111	Molecular Biology of Proteins	(6 UOC)
CHEM3011	Physical Chemistry	(6 UOC)
CHEM3041	Analytical Chemistry	(6 UOC)
CHEM3101	Project Laboratory in Chemistry	(6 UOC)
MATS1002	Microstructure Analysis	(3 UOC)
MATS1013	Diffusion and Kinetics	(3 UOC)
MATS1262	Mechanical Properties of Materials	(6 UOC)
MATS1343	Materials Industry Management B	(3 UOC)
MATS4023	Phase Transformations	(3 UOC)
MATS4133	Deformation and Strengthening Mechanisms	(3 UOC)
MATS4333	Fracture Mechanics	(3 UOC)
MICR2201	Fundamentals of Microbiology and Immunology	(6 UOC)
NANO3440	Biosensors and Biodevices for Nanotechnology	(3 UOC)
PHYS2630	Electronics	(3 UOC)
PHYS3040	Experimental Physics A1	(3 UOC)
PHYS3320	Topics in Condensed Matter Physics	(3 UOC)
PHYS3410	Biophysics 2	(3 UOC)
POLY3011	Polymer Science - Theory	(3 UOC)
POLY3012	Polymer Science - Practice	(3 UOC)

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

See Program Structure above and contact the School of Materials Science and Engineering for more information.

3950 Bachelor of Optometry**BOptom**

Note: This program is no longer offered to commencing students. Please refer to program **3952 BOptom BSc**.

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

The School of Optometry and Vision Science provides a four stage full-time program in Optometry leading to the award of the degree of Bachelor of Optometry at either the Pass or Honours level.

Professional training including clinical optometry is interwoven with basic studies of visual and ocular science over the four Stages of the program. The only entry point into Optometry will be at Stage 1 level.

Program Objectives and Learning Outcomes

This program aims to provide a strong knowledge base in the field of optometry.

Program Structure**Stage 2**

OPTM2101	Ocular and Visual Science 2A	(6 UOC)
OPTM2102	Clinical Optometry 2A	(6 UOC)

OPTM2105	Optics and the Eye 3	(3 UOC)
OPTM2201	Ocular and Visual Science 2B	(6 UOC)
OPTM2202	Clinical Optometry 2B	(6 UOC)
OPTM2206	Pathology for Optometry	(3 UOC)
PHPH2121	Principles of Physiology A	(6 UOC)
PHPH2221	Principles of Physiology B	(6 UOC)
General Education courses		(6 UOC)

Stage 3

OPTM3102	Clinical Optometry 3A	(12 UOC)
OPTM3108	Ocular Disease	(6 UOC)
OPTM3203	Clinical Optometry 3B	(3 UOC)
OPTM3204	Clinical Optometry 3C	(8 UOC)
OPTM3209	Environmental Optometry	(6 UOC)
PHPH3302	Pharmacology for Optometry	(4 UOC)
PSYC3516	Psychology for Optometry	(3 UOC)
General Education courses		(6 UOC)

Stage 4

MEDM8001	Principles of Medicine for Optometry Students	(3 UOC)
OPTM4114	Optometry and the Professional Environment A	(3 UOC)
OPTM4210	Research Project	(3 UOC)
OPTM4214	Optometry and the Professional Environment B	(3 UOC)
OPTM4311	Clinical Optometry 4A	(12 UOC)
OPTM4312	Clinical Optometry 4B	(12 UOC)
OPTM4313	Clinical Optometry 4C	(12 UOC)

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

Please refer to Program Structure and contact the School of Optometry for the academic requirements relating to this program.

3952 Bachelor of Optometry Bachelor of Science**BOptom BSc****Typical Duration**

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

Optometry combines the theoretical discipline of vision science with the clinical art of primary eye care. Vision science includes the optics of lenses, the physiology of the eye, the psychophysics of vision and the neuroscience of the brain. Optometry includes the diagnosis and management of ocular disease, the dispensing of spectacles and contact lenses, the management of people with special needs (children, low vision), sports vision and vision in the workplace.

The School of Optometry and Vision Science offers a five-year full-time combined BOptom BSc program. Graduates of this program will be able to register as an optometrist in Australia. The degree is also recognised in New Zealand and in most parts of Asia. Job opportunities in this field are excellent and are expected to remain excellent given the high visual demands in the modern computer-based workplace, and the aging population in Australia.

An innovative feature of this program is its alternate entry mechanism. Local students who do not achieve the cut-off UAI or equivalent for direct entry into the Optometry program can apply for one of approximately 25 transfer positions. Students wishing to apply for transfer into the BOptom BSc (3952) program will 1) be completing at the end of the year Stage 1 of the Bachelor of Science (3970) Vision Science study plan (including recommended courses), 2) have completed the UMAT exam held in July during Stage 1 of their BSc program and 3) should achieve a minimum performance level of Distinction (75%) in both Stage 1 Vision Science courses (VISN1211 and VISN1231). Students meeting these requirements will be ranked using an algorithm that includes their UAI or equivalent, their WAM achieved at the end of Stage 1 of their BSc (3970) Vision Science study plan and their UMAT result. To be competitive for transfer selection students would need an entry UAI or equivalent of at least 90.

A lower entry index may be used for students from rural and regional locations.

Assumed knowledge

UNSW has a policy of Assumed Knowledge. It is assumed that through secondary or equivalent studies a student will have achieved a level of knowledge of the subject area that is considered appropriate for their future University study. The BOptom BSc program assumes that students entering the program have a strong ability in English, Chemistry and HSC Mathematics (does not include General Mathematics; must have a mark of at least 90; HSC Extension Mathematics is highly recommended). Other recommended knowledge is Physics. Bridging Courses are available to students entering UNSW; these courses usually run in January – February, before the start of Semester 1. Students who do not have the appropriate assumed knowledge are strongly advised to undertake the relevant Bridging Course/s, or other appropriate preparation.

Program Objectives and Learning Outcomes

The program aims to provide a strong knowledge base and clinical competence in the field of optometry and vision science.

Program Structure

Stage 1

BIOS1201	Molecules, Cells and Genes	(6 UOC)
CHEM1031	Higher Chemistry 1C	(6 UOC)
CHEM1829	Biological Chemistry for Optometry	(6 UOC)
MATH1131	Mathematics 1A	(6 UOC)
PHYS1121	Physics 1A	(6 UOC)
VISN1211	Vision Science 1	(6 UOC)
VISN1231	Optics 1	(6 UOC)
Elective – choose one of the following		
BIOS1101	Evolutionary and Functional Biology	(6 UOC)
PSYC1011	Psychology 1B	(6 UOC)

Stage 2

OPTM2111	Optometry 2A	(6 UOC)
OPTM2211	Optometry 2B	(6 UOC)
PHPH2101	Physiology 1A	(6 UOC)
PHPH2201	Physiology 1B	(6 UOC)
VISN2111	Vision Science 2A	(6 UOC)
VISN2131	Optics and the Eye	(6 UOC)
VISN2211	Vision Science 2B	(6 UOC)
VISN2231	Introduction to Ocular Disease	(6 UOC)

Stage 3

OPTM3111	Optometry 3A	(6 UOC)
OPTM3131	Ocular Disease 3A	(6 UOC)
OPTM3211	Optometry 3B	(6 UOC)
OPTM3231	Ocular Disease 3B	(6 UOC)
PHPH330#	Pharmacology for Optometry	(4 UOC)
VISN3111	Vision Science 3A	(6 UOC)
VISN3211	Vision Science 3B	(6 UOC)
General Education courses		(6 UOC)

Stage 4

BEES204#	Data analysis for Optometry	(3 UOC)
MEDM8001	Principles of Medicine for Optometry Students	(3 UOC)
OPTM4110	Optometry 4A	(3 UOC)
OPTM4131	Clinical Optometry 4A	(6 UOC)
OPTM4151	Ocular Therapeutics 4A	(6 UOC)
OPTM4170	Professional Optometry 4A	(3 UOC)
OPTM4211	Optometry 4B	(6 UOC)
OPTM4231	Clinical Optometry 4B	(6 UOC)
OPTM4251	Ocular Therapeutics 4B	(6 UOC)
OPTM4270	Professional Optometry 4B	(3 UOC)
PSYC3516	Psychology for Optometry	(3 UOC)

Stage 5

OPTM5111	Clinical Optometry 5A	(6 UOC)
OPTM5131	Specialist Clinical Optometry 5A	(6 UOC)
OPTM5151	Clinical Ocular Therapeutics 5A	(6 UOC)
OPTM5171	Research Project 5A	(6 UOC)
OPTM5211	Clinical Optometry 5B	(6 UOC)
OPTM5231	Specialist Clinical Optometry 5B	(6 UOC)
OPTM5251	Clinical Ocular Therapeutics 5B	(6 UOC)
OPTM5271	Research Project 5B	(6 UOC)

General Education Requirements

6 units of credit to be completed in Stage 3

Academic Rules

1. The program is a five-year full-time combined program leading to the award of the two degrees of Bachelor of Optometry and Bachelor of Science (BOptom BSc).
2. The five years of the program include at least 111 units of credit in the Science program (3970) and a minimum of 240 units of credit in total.
3. The 111 Science program units of credit must include 48 Level 1 units of credit.
4. The degrees of Bachelor of Optometry and Bachelor of Science are not awarded until the completion of the full five-year program.
5. There will be a testamur for each degree in the combined program.
6. Progression through the Stages of the BOptom BSc program is subject to academic performance. Students are expected to maintain a CREDIT average (65% WAM) in the program. Students not maintaining this level of performance in Stages 1 and 2 of the program will be referred to School Advisors for counselling and career guidance as required. Students who do not attain the required CREDIT average (65% WAM) at the end of Stage 3 will not be allowed to progress into Stage 4. Students who do not attain the required CREDIT average (65% WAM) at the end of Stage 3 of the program will normally be required to transfer to the Bachelor of Science (3970) program, complete a further 6 UOC of General Education and take out the BSc award with a major in Vision Science at a Pass level.

3432 Bachelor of Psychology

BPsychol

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

Psychology is a discipline of both scientific research and applied practice. As a science, psychology is concerned with the study of behaviour and its underlying mental and neural processes. Topics of study include learning, memory, cognition, perception, motivation, life-span development, personality, social interactions, and abnormal psychology. Psychology has many areas of application, especially in clinical, correctional, counselling, educational, and organisational settings. In addition, people with training in psychology pursue careers in academic research, health research, developmental disabilities and rehabilitation, ergonomics, occupational health and safety, personnel selection, training, and management; vocational guidance, and marketing.

Program Objectives and Learning Outcomes

The four-stage full-time program leads to the degree of Bachelor of Psychology. The degree is designed to provide the student with (1) a sound understanding of psychological theory, research skills, and psychological techniques, (2) psychology elective studies in areas of individual interest, (3) supporting studies in science disciplines, and (4) the opportunity to study courses in other faculties including Arts and Social Sciences, and Commerce and Economics.

Program Structure

Stage 1

PSYC1001	Psychology 1A	(6 UOC)
PSYC1011	Psychology 1B	(6 UOC)
PSYC1021	Introduction to Psychological Applications	(6 UOC)
Courses from Science schools		(12 UOC)

18 elective units of credit selected from Arts and Social Sciences, Commerce and Economics, Science or other approved faculty.

Stage 2

PSYC2001	Research Methods 2	(6 UOC)
PSYC2061	Social and Developmental Psychology	(6 UOC)
PSYC2071	Perception and Cognition	(6 UOC)
PSYC2081	Learning and Physiological Psychology	(6 UOC)
PSYC2101	Assessment and Personality	(6 UOC)

12 Level II units of credit following on from one of the Level 1 non-psychology courses

General Education (6 UOC)

Stage 3

PSYC3001	Research Methods 3A	(6 UOC)
PSYC3011	Research Methods 3B	(6 UOC)
General Education		(6 UOC)

PLUS ONE course from EACH of the following 3 elective groups and two other Level III Psychology courses:*

Advanced Perceptual/Cognitive

PSYC3151	Cognition and Skill	(6 UOC)
PSYC3211	Cognitive Science	(6 UOC)
PSYC3221	Vision and Brain	(6 UOC)
PSYC3311	The Psychology of Language	(6 UOC)
PSYC3321	Cognitive Development	(6 UOC)

Advanced Biological

PSYC3051	Physiological Psychology	(6 UOC)
PSYC3241	Psychobiology of Memory and Motivation	(6 UOC)

Advanced Social

PSYC3121	Social Psychology	(6 UOC)
PSYC3271	Personality and Individual Differences	(6 UOC)
PSYC3281	Interpersonal Behaviour	(6 UOC)

Stage 4

PSYC4053	Psychology 4A	(24 UOC)
PSYC4063	Psychology 4B	(24 UOC)

*Note: Not all level III Psychology elective courses are necessarily offered each year.

General Education Requirements

Students in this program must satisfy the University's General Education requirements. For further information, please refer to the General Education section in this Handbook.

Academic Rules

In order to graduate students must satisfy requirements for the award by passing all courses specified for the degree.

The final grading for the degree is based on performance in all Psychology courses excluding PSYC1001, PSYC1011 and PSYC1021 taken over the four stages. The degree may be awarded at either Pass level or with Honours.

Study Load

This is a four-stage full-time program. **In any one year students must enrol in the full load specified for a particular stage.** Only in exceptional circumstances will students be allowed to enrol in a reduced program for a stage, and this requires the permission of the Head of School of Psychology.

Academic Standing

Students will be required to maintain a high level of performance for progression. Any student who fails to achieve an average of 65 percent or higher in psychology courses taken in any stage (based on the first attempt result for each course) will be deemed to be falling below that level of performance. This will be drawn to the attention of the student and they may be interviewed by the Head of School (or nominee) to discuss the reasons for poor performance. This interview may lead to a recommendation to undertake special studies to assist learning. Students whose performance remains below the required level at the end of Stage 2 or 3, or remains on poor academic standing, may be required to transfer to the Bachelor of Science or another degree and/or to show cause why such transfer should not be required.

Registration as a Psychologist

In order to become a member of the professional body, the Australian Psychological Society (APS), and for registration as a psychologist in New South Wales, students first need a university bachelor degree which includes four years of approved training in psychology. The BPsychol degree provides four years of approved training in psychology. Students must also follow this by completing an accredited 5th and 6th year academic degree such as one of the Master of Psychology Degrees (Clinical, Forensic, Organisational) or a combined Doctor of Philosophy/Master of Psychology Degree as offered by this University. An alternative of two years of supervised experience in professional practice may be undertaken for registration as a psychologist in NSW.

3451 Diploma in Innovation Management**DiplInnovMan****Typical Duration**

0.8 year

Minimum UOC for Award

36 units of credit

Typical UOC per Session

18 units of credit

Program Description**Undergraduate Students**

The Diploma in Innovation Management is a unique undergraduate program currently being offered by the Entrepreneurs in Science Unit. This program is open to all undergraduate students commencing second year of a science-based (or related discipline) degree or combined degree. Students are assessed for admission based on their past leadership and entrepreneurial activities, enthusiasm and academic achievement. The program aims to encourage an entrepreneurial mind-set and provide students with the knowledge and skills needed for developing business opportunities based on scientific innovation.

Course material covers areas such as creativity in enterprises, business principles, business planning for new ventures, funding, management and commercialisation of intellectual property, and valuation and assessment of high technology businesses. Students engage in an exercise to set up and run a business venture and will participate in case studies with Australian and international entrepreneurs. The lectures, workshops, case studies and tutorials in each of the program's courses are delivered by a well-balanced mixture of university academics and expert industry and government professionals.

Postgraduate Students

At present, the EIS unit does not offer any formal postgraduate programs. However, current postgraduate science students are able and encouraged to "sit in" on several of the lecture series on offer as part of the Diploma program.

Program Objectives and Learning Outcomes

The Innovation Management program is primarily directed at empowering future R&D scientists with an entrepreneurial education that will allow them to recognise, evaluate, finance and exploit science-based commercial opportunities. Graduates with the combined qualifications will also be more competitive for all employment opportunities whether they are in academia, research or administration and will have a wider range of career options. Combinations of business and technical skills are required in careers that involve intellectual property, high technology finance (venture capital) and investment (business analysis), R&D management, corporate management in the biotechnology industry sector, government regulation and administration, and bioscience sales and marketing.

Program Structure

The Diploma is taught concurrently over the student's final 3 years of study and involves 36 units of credit divided into seven formal courses and an industry work placement. To avoid study overload, three of the program's core courses (INOV2100, INOV3100, INOV4001) are delivered in winter or summer sessions. At the completion of 4 to 4.5 years of study, students become eligible for the award of a combined Bachelor of Science and the Diploma in Innovation Management. The industry work placement component is normally undertaken following the completion of the student's Honours program or 4th year of university study.

The Diploma in Innovation Management Study Plan**Stage 2**

INOV2100	The Innovation Process (X2)	(3 UOC)
INOV2110	Business Skills (S2)	(3 UOC)

Stage3

INOV3100	Strategic Communication (X1)	(3 UOC)
INOV3110	Technical Publications (S2)	(3 UOC)
SCOM2505	Science Communication Project A (X1)	(3 UOC)
BIOT3071	Commercial Biotechnology (S1)	(6 UOC)
BIOT3091	Professional Issues in Biotechnology (S2)	(6 UOC)

Stage 4

INOV4001	The Bioentrepreneurial Process (X1)	(6 UOC)
INOV4101	Innovation in Practice A or	(6 UOC)
INOV4201	Innovation in Practice B or	(12 UOC)
INOV4301	Innovation in Practice C	(18 UOC)

Note: For the award of the Diploma in Innovation Management, students must complete all courses in the study plan. Students that take BIOT3071 and BIOT3091 courses as part of their BSc program must complete Innovation in Practice courses at a sufficient UOC level to meet the total 36 UOC requirement for the award of the Diploma.

Academic Rules

Please contact the Faculty of Science for information.

Combined Degree Programs

Faculty of Arts & Social Sciences and the Faculty of Science

3930 Science/Arts

Bachelor of Science Bachelor of Arts BSc BA

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This combined degree program, the Bachelor of Science Bachelor of Arts, enables students to complete a major sequence from those available in Science and in the Faculty of Arts and Social Sciences.

Note: Majors in Philosophy and History & Philosophy of Science may not be taken as part of the Science component.

The typical duration of this program is four years full-time.

For admission to the program, students must satisfy the entry requirements to Science as well as to the Faculty of Arts and Social Sciences. This degree program is administered by the Faculty of Science.

Program Objectives and Learning Outcomes

Please refer to the program objectives as listed for the Bachelor of Science program 3970 and the Bachelor of Arts program 3400.

Program Structure

Program Requirements

This program requires the successful completion of 192 units of credit in an approved sequence of study.

Students are required to undertake courses totalling 84 units of credit from both the Science and the Arts components of this combined degree. The remaining 24 units of credit may be from either area.

In addition students must complete an approved major sequence of at least 42 units of credit. Students should enrol in at least 24 Level 1 units of credit and no more than 36 Level 1 units of credit in both the Science and the Arts components of the program. No more than 12 units of credit can be taken in any one school or department, for the arts component and 18 UOC in any school for the science component.

Selecting Majors

For information on available Science majors, please refer to the program entry 3970 Bachelor of Science and Table A in this Handbook or contact the Science Student Centre on campus.

For information on available Arts majors, please refer to the program entry 3400 Bachelor of Arts entry in the Arts and Social Sciences section in this Handbook or contact the Faculty of Arts and Social Sciences Office on campus.

Academic Rules

For program rules and requirements, please refer to the Program Structure section above.

Note: Students seeking to complete the Science component of a combined degree would normally be expected to complete a minimum of 84 units of credit in Science courses at Levels I–III, including a major as specified for program 3970. It may be difficult to undertake some plans as part of combined degree structures due to timetable constraints. Students may

not enrol in the Honours Year until they have satisfied all requirements for both the Science and Arts components of the degree.

3931 Advanced Science/Arts

Bachelor of Science Bachelor of Arts BSc BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined Advanced Science/Arts program enables students to complete a study plan in Advanced Science, in addition to a major sequence in the Faculty of Arts and Social Sciences. The duration of the degree program is normally five years full-time.

For admission to this program, students must satisfy the entry requirements to Advanced Science as well as to the Faculty of Arts and Social Sciences.

This degree program is administered by the Faculty of Science.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in both their Advanced Science and Arts specialisations.

Program Structure

The total units of credit required for this program is 240. Students are required to undertake 96 units of credit for the Advanced Science component of this degree program and 84 units of credit for the Arts component, including an approved Arts major sequence of 42 units of credit. The remaining 12 units of credit may be from either area. A further 48 units of credit constitutes the Stage 4 Honours sequence of the Advanced Science study plan.

Students should enrol in at least 24 Level I units of credit and no more than 36 Level I units of credit in both the Advanced Science and the Arts component of the program. No more than 12 units of credit can be taken in any one school or department in the Arts component of the program and 18 units of credit from any one school in the Science component.

Selecting Advanced Science Study Plans and Arts Majors

For information on available Advanced Science study plans, please refer to the 'Plan Rules and Information' section following in this Handbook or contact the Science Student Centre on campus.

For information on available Arts majors, please refer to the program entry 3400 Bachelor of Arts in the Faculty of Arts and Social Sciences section in this Handbook or contact the Faculty of Arts and Social Sciences Office on campus.

Academic Rules

Please refer to Program Structure above.

Note: Students seeking to complete the Advanced Science component of this combined degree program would normally be expected to complete the full Stage 4 Honours sequence for the study plan in which they are enrolled. In practice, it may be difficult to undertake some study plans as part of combined degree structures and students may be restricted in the number of Advanced Science courses that they can undertake. Where these are insufficient to allow the student to complete the recommended study plan, students are advised to consult the relevant Head of School.

3935 Science/Social Science

Bachelor of Science Bachelor of Social Science BSoc BSocSc

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This combined degree program, the Bachelor of Science Bachelor of Social Science, enables students to complete a major sequence from those available in Science and a specialisation in Social Science within the Faculty of Arts and Social Sciences.

The typical duration of this program is 4 years full-time.

For admission to the program, students must satisfy the entry requirements to Science as well as to the Faculty of Arts and Social Sciences.

This degree program is administered by Faculty of Science.

Program Objectives and Learning Outcomes

Please refer to the program objectives as listed for the Bachelor of Science (BSc) program 3970 and the Bachelor of Social Science (BSocSc) program 3420.

Program Structure

Program Requirements

This program requires the successful completion of 192 units of credit in an approved sequence of study.

In addition to the minimum requirements of the BSc program (84 units of credit), students must complete a major as listed in Table A in the 'Plan Rules and Information' section of this Handbook as well as a minimum of 84 units of credit in the Faculty of Arts and Social Sciences.

This includes the Social Science core program of 48 units of credit.

Social Science Core Program (48 UOC)

SLSP1000	Social Science and Policy	(6 UOC)
or		
SLSP1002	Introduction to Policy Analysis	(6 UOC)
and		
SLSP1001	Research and Information Management	(6 UOC)
SLSP2000	Political Economy and the State	(6 UOC)
SLSP2001	Applied Social Research 1	(6 UOC)
SLSP2002	Policy Analysis Case Studies	(6 UOC)
SLSP3000	Social Theory and Policy Analysis	(6 UOC)
SLSP3001	Applied Social Research 2	(6 UOC)
SLSP3002	Social Science and Policy Project	(6 UOC)

and
An additional 36 units of credit from an approved sequence in a particular Social Science discipline.

Note: Students may complete a major (42 units of credit) in a Social Science discipline by completing an additional elective course as part of the remaining 24 units of credit required for this combined degree program.

Selecting Science and Social Science Majors

For information on available Science majors, please refer to Table A in the 'Plan Rules and Information' section of this Handbook or contact the Science Student Centre on campus.

For information on available Social Science majors, please refer to the program entry for 3420 Bachelor of Social Science in the Arts and Social Sciences section in this Handbook or contact the Faculty of Arts and Social Sciences Office on campus.

Academic Rules

For program rules and requirements, please refer to the Program Structure section above.

Note: Students seeking to complete the Science component of a combined degree would normally be expected to complete a minimum of 84 units of credit in Science courses at Levels I–III, including a major as specified for program 3970. It may be difficult to undertake some plans as part of combined degree structures due to timetable constraints.

Students may not enrol in the Honours Year until they have satisfied all requirements for both the Science and Social Science components of the degree.

3936 Advanced Science/Social Science

Bachelor of Science Bachelor of Social Science BSc BSocSc

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined Advanced Science/Social Science program enables students to complete a Study Plan in Advanced Science, in addition to a program of study in Social Science offered by the Faculty of Arts and Social Sciences.

The duration of this combined degree program is normally five years full-time.

For admission to this program, students must satisfy the entry requirements to Advanced Science as well as to the Faculty of Arts and Social Sciences.

This degree is administered by the Faculty of Science.

Program Objectives and Learning Outcomes

On completion of this program, students will have attained a sound knowledge base in both their Advanced Science specialisation and Social Science.

Program Structure

The total units of credit required for this program is 240.

Students are required to undertake 96 units of credit for the Advanced Science component of this degree program and 84 units of credit for the Social Science component which includes the Social Science core program of 48 units of credit:

Social Science Core Program

One of the following courses:

SLSP1000	Social Science and Policy	(6 UOC)
or		
SLSP1001	Research and Information Management	(6 UOC)
and		
SLSP1002	Introduction to Policy Analysis	(6 UOC)
SLSP2000	Political Economy and the State	(6 UOC)
SLSP2001	Applied Social Research 1	(6 UOC)
SLSP2002	Policy Analysis Case Studies	(6 UOC)
SLSP3000	Social Theory and Policy Analysis	(6 UOC)
SLSP3001	Applied Social Research 2	(6 UOC)
SLSP3002	Social Science and Policy Project	(6 UOC)

and

An additional 36 units of credit from an approved sequence in a particular Social Science discipline. Please refer to List F of the Faculty of Arts and Social Sciences rules.

24 units of credit free electives taken from either the Science or the Social Science Area

Note: Students may complete a major (42 UOC) in a Social Science discipline from List F in the Faculty of Arts and Social Sciences by completing an additional elective course as part of the remaining 24 units of credit required for this combined degree program.

For List F, please refer to the program entry for 3420 Bachelor of Social Science in the Arts and Social Sciences section in this Handbook or contact the Faculty of Arts and Social Sciences Office on campus.

Selecting Advanced Science Study Plans

For information on available Advanced Science study plans, please refer to the 'Plan Rules and Information' section following in this Handbook or contact the Science Student Centre on campus.

Academic Rules

Please refer to Program Structure above.

Note: Students seeking to complete the Advanced Science component of this combined degree program would normally be expected to complete the full Stage 4 Honours sequence for the Study Plan in which they are enrolled. In practice, it may be difficult to undertake some Study Plans as part of combined degree structures and students may be restricted in the number of Advanced Science courses that they can undertake. Where these are insufficient to allow the student to complete the recommended Study Plan, students are advised to consult the relevant Head of School. Students may not enrol in the Honours Year until they have satisfied all requirements for both the Science and Social Science components of the degree.

3932 Bachelor of Environmental Science Bachelor of Arts

BEnvSc BA

Typical Duration

5 years

Minimum UOC for Award

240 units of credit

Typical UOC per Session

24 units of credit

Program Description

The combined degree requires a minimum of five years to complete. To satisfy requirements for Environmental Science, a student must complete the coursework in the ENVSc core and a discipline specialisation, as well as a 24 units of credit independent research project. Refer to Environmental Science Program 3988 for further details on core courses and specialisations.

Students must complete a minimum of 84 units of credit in courses offered by the Faculty of Arts and Social Sciences, including an approved major sequence of 42 units of credit. Students should enrol in at least 24 Level 1 units of credit and no more than 36 Level 1 units of credit within the Arts component of the program. Of these, no more than 12 units of credit can be taken in any one school or department.

This degree is administered by the Faculty of Science.

Program Structure

Selecting Environmental Science Specialisations and Arts Majors

For information on available specialisations within Environmental Science as well as required core coursework, please refer to the program entry for 3988 Bachelor of Environmental Science or contact the Science Student Centre.

For information on available Arts majors, please refer to the program entry 3400 Bachelor of Arts in the Faculty of Arts and Social Sciences section in this Handbook or contact the Faculty of Arts and Social Sciences Office on campus.

Academic Rules

Please refer to Program Structure or contact the Faculty of Science for the academic requirements relating to this program.

4075 Bachelor of Science Bachelor of Education

BScBEd

Typical Duration

4 years

Minimum UOC for Award

192 units of credit

Typical UOC per Session

24 units of credit

Program Description

This four-year, double degree requires the completion of a BSc with a major in Science or Mathematics, as well as a major sequence in Education consisting of Educational Theory and Teaching Methods. In addition, students complete field experiences (teaching practice) in third year (10 days) and fourth year (40 days).

Program Objectives and Learning Outcomes

Please refer to the objectives in the BSc Science and Mathematics degree (Program 3970) and contact the School of Education for Program objectives.

Program Structure

A) Students intending to become **science teachers**, or wishing to graduate in the **natural sciences** (excluding Mathematics), will be required to complete:

i) An approved major from Table A (majors) in the handbook (also see below) corresponding to one of the HSC science teaching disciplines: Physics, Chemistry, Biological Sciences, or Earth and Environmental Sciences. This will include at least 42 UOC at level II and III in a single discipline and study area, including at least 18 units of credit from level III. Study plans for these major sequences are defined in the 3970 program.

ii) At least 12 UOC at level 1 in a second science teaching discipline other than the major.

iii) At least 12 UOC at level 1 in either Chemistry or Physics.

iv) At least 6 UOC at level 1 in each of the main teaching disciplines: Physics, Chemistry, Biological Sciences, Earth and Environmental Sciences.

v) At least 78 UOC in Education. The normal pattern is two courses in the first year (12 UOC); one course in second year (6 UOC); and three

Approved Majors from Table A (Majors)*

NSW Department of Education Teaching Discipline	Biology	Chemistry	Physics	Earth and Environmental Science	Mathematics
Table A Major	Biochemistry Biological Anthropology Biological Science Biotechnology Ecology Genetics Marine Biology Medical Microbiology & Immunology Microbiology Molecular Biology Pharmacology	Biochemistry# Chemistry Toxicology	Physics	Biochemistry# Bio. Sciences Ecology# Environmental & Earth Sciences Geology Physical Geography Marine Geology Physical Oceanography/ Meteorology Spatial Information Systems	Mathematics Physical Oceanography Physical Oceanography/ Meteorology Statistics

*List not exhaustive but representative of our knowledge-to-date. Students are advised to seek advice from the program authority to ensure that their major and Science courses meet the requirements for the BScBEd degree and are recognised as teaching disciplines by DET.

#Some disciplines are recognised as multiple teaching disciplines by DET

courses in the third year (18 UOC) which include one theory elective, introductory teaching methods and teaching experience; and 42 UOC in fourth year, which include educational theory, practice teaching, teaching method, and professional courses.

vi) At least 84 UOC from Science schools.

vii) A maximum total of 10 Level 1 courses (60 UOC).

viii) A total of 192 UOC. Provided all requirements for Science and Education are met, students may complete the balance by choosing courses from the Majors and Schools identified in Tables A and B.

Note:

(a) Upper level Physics and Chemistry courses require completion of at least 12 units of credit of first year Mathematics. Some level three physics courses require a further 6 UOC of level II Mathematics.

(b) For entry to Honours (fourth year) in one of the science disciplines, at least 24 UOC need to be taken at Level III in the discipline, and approval needs to be obtained from the head of the relevant science school.

B) Students wishing to become **Mathematics teachers**, or graduate in **Mathematics**, will be required to:

i) Complete 60 UOC in Mathematics. These Mathematics courses must be chosen so as to fulfill the requirements for a Mathematics major in the science degree program 3970, and include the courses MATH3560 'History of Mathematics' and MATH3570 'Foundations of Calculus'.

ii) Complete at least 6 UOC of computing courses, which can be taken from a variety of different schools in the university.

iii) Complete 78 UOC in Education. The normal pattern is two courses in the first year (12 UOC), one course in second year (6 UOC), and two courses (teaching method (6 UOC) and practice teaching (6 UOC)) in third year, and 48 UOC in fourth year, which include educational theory, practice teaching, teaching method, and professional courses.

iv) A total of 192 UOC. Provided all requirements for Mathematics and Education are met, students may complete the balance by choosing courses from the Majors and Schools identified in Tables A and B.

Note:

(a) All prospective Mathematics teachers need to do the BScBE combined degree. They can no longer (from 2000) do the BABEd degree.

(b) In stage 4, there is the opportunity to do Computer Studies Method if 24 UOC of computing have been completed.

Academic Rules

Please refer to Program Structure for the Academic Requirements relating to this program. Please refer to the School of Education for information on required courses and program structure for each teaching discipline.

Faculty of Commerce and Economics and the Faculty of Science

3529 Bachelor of Commerce Bachelor of Science BCom BSc

For details of the combined Science and Commerce Programs, please refer to the Faculty of Commerce and Economics section of this Handbook.

Faculty of Engineering and the Faculty of Science

Bachelor of Engineering Bachelor of Science BE BSc

For details of the combined Science and Engineering programs, please refer to the appropriate schools in the Faculty of Engineering section of this Handbook.

3711 Science/Aerospace Engineering

3042 Science/Chemical Engineering

3730 Science/Civil Engineering

3726 Science/Computer Engineering

3725 Science/Electrical Engineering

3735 Science/Environmental Engineering

3102 Science/Industrial Chemistry

3711 Science/Manufacturing Engineering and Management

3711 Science/Mechanical Engineering

3711 Science/Mechatronic Engineering

3142 Science/Mining Engineering

3711 Science/Naval Architecture

3655 Science/Photovoltaics and Solar Energy

3651 Science/Software Engineering

3746 Science/Surveying and Spatial Information Systems

3641 Science/Telecommunications

School of Law and the Faculty of Science

4770 Bachelor of Science Bachelor of Laws BSc LLB

For details of the combined Science and Laws program, refer to the Faculty of Law section of this Handbook.

Plan Rules and Information

Table A

Major Plans for the Bachelor of Science (3970) program and Combined BSc Programs

How to Read this Table

New Students

When you have decided which major(s) you want to study, you should enrol in the courses listed for Stage 1. In some majors there is only a small number of specified Stage 1 courses and you should choose additional courses to enrol in, such that you have a full program (24 units of credit per session). These additional courses (electives) may come from any available Level I courses from the subject areas within Table A or Table B.

Students who are unsure which major to choose may enrol in an 'undeclared plan'. The purpose of an undeclared plan is to cover a combination of Level I courses to enable a student to enter a variety of majors. Students are advised to choose a major before commencing Stage 2.

Continuing Students

Students who have completed Stage 1 should select specified courses listed for their major(s) in Stage 2 and Stage 3. Note that these are the minimum requirements for majors and students may take additional courses in the same area provided they also complete a minor and General Education requirements.

Notes:

1. Some of the courses listed in the later stages of a major may have prerequisites in an earlier stage or corequisites to be taken at the same time. It is important to check the course descriptions found in the rear of this Handbook for details.

2. Courses listed for Stage 1 are recommended courses. It is important to note that many of these courses may be required as prerequisites for courses required for later stages.

3. Mathematics Courses:

(a) Many courses in Mathematics are offered at two levels. The higher level courses cater for students with greater mathematical ability and/or a higher level of prior knowledge. Courses listed in Table A are all at the ordinary level. Students with suitable qualifications are encouraged to enrol in the corresponding higher level courses which are listed in the rear of this Handbook (see MATH### courses). In cases where there is a higher course, students should note that the proportion of Distinction and High Distinction grades is lower in the corresponding ordinary level course.

(b) MATH2060 may be omitted from the Mathematics major if the professional education requirement is being met in the other discipline of a double major or double degree.

(c) Students majoring in Mathematics are strongly recommended to take MATH2301 or an equivalent course in practical numerical computing.

4. Chemistry at Level I is offered at two levels. The higher level courses cater for students with greater chemical ability and/or a higher level of prior knowledge. Students with the required background are strongly encouraged to enrol in the higher level courses (CHEM1031 Higher Chemistry 1C and CHEM1041 Higher Chemistry 1D)

5. Students are advised that Mathematics or Physics courses totalling 6 units of credit are recommended for all programs.

6. BIOC2181 and BIOC2291 may be substituted for BIOC2101 and BIOC2201 respectively (but only with the permission of the Head of School). A minimum grade of Credit (65%) in BIOC2181 and BIOC2291 will normally be required for entry into Level III Biochemistry courses.

7. Students wishing to do Honours will need to consult with the appropriate school at the end of Stage 2 of their program.

Table A: Major Plans for the Bachelor of Science (3970) program and Combined BSc Programs

Major Contacts	Stage 1	Stage 2	Stage 3
Anatomy Dr B Freeman	BIOS1101, BIOS1201 Plus 6 of Level I Chemistry	ANAT2111 Plus 12 UOC from: ANAT2241, ANAT2341, ANAT2601, ANAT2611	18 UOC from: ANAT3121 ANAT3131, ANAT3141, ANAT3231, ANAT3411, ANAT3421 Plus 6 UOC from: i) Level III Anatomy not already taken, <i>or</i> ii) Level III Biochemistry, Biological Science, Microbiology, Pathology or Physiology
Biochemistry BABS Student Office	BIOS1101, BIOS1201 CHEM1011 <i>or</i> CHEM1031 CHEM1021 <i>or</i> CHEM1041 Plus at least 6 UOC from: MATH1031, MATH1041	BIOC2101, BIOC2201 Plus 6 UOC from: BIOS2021 <i>or</i> BIOS2621, CHEM2021, CHEM2041, MICR2011	A total of 24 UOC: 12 <i>or</i> 18 UOC from: BIOC3111, BIOC3261, BIOC3271 Plus 0 - 12 UOC from: BIOC3121, BIOC3281 Plus 0 <i>or</i> 6 UOC from: ANAT3231, BIOT3061, CHEM3021, CHEM3041, MICR3041, PHPH3211, PHPH3221
Biological Anatomical Anthropology Dr D Curnoe	BIOS1101, BIOS1201 Level 1 Chemistry is required for ANAT2111 and Level II Biochemistry and Physiology courses (check individual course prerequisites)	ANAT2601, ANAT2611 Plus ANAT2511* <i>or</i> ANAT2111 Plus 6 UOC from Level II Biological Science, Biochemistry, Pathology** <i>or</i> Physiology *A Credit grade is required in ANAT2511 for Level III Anatomy courses **Note that ANAT2241 may be required for Level II Pathology	ANAT3601 Plus 12 UOC from Level III Anatomy (ANAT3131 and ANAT3141 recommended) Plus a further 6 UOC from Level III Biological Science, Biochemistry, Pathology <i>or</i> Physiology
Biological Science BEES Student Office	BIOS1201, BIOS1101, CHEM1011, MATH1041 Also recommended: BIOS1301	BIOS2011, BIOS2021 (<i>or</i> BIOS2621), BEES2041, Plus 6 UOC from: BIOS2031, BIOS2051, BIOS2061	24 UOC from Level III Biological Science courses.
Biomechanics Dr A McIntosh	12 UOC from Level I Mathematics Recommended: MATH1131, MATH1231 Also recommended: PHYS1111	ANAT2511, SESC2451 Also recommended: PHYS1121.	A total of 30 UOC: BIOM9541, SESC3451 Plus 6-18 UOC from: ANAT3131, SESC3101, BIOM9561, SESC4420 Plus 0-12 UOC from: PHPH2101, PHPH2201, PHYS2410
Biotechnology BABS Student Office	BIOS1201, CHEM1011, CHEM1021, MATH1031, MATH1041, BIOS1101 <i>or</i> BIOT1011	BIOC2101, BIOC2201, MICR2201 Also recommended: BIOS2021 <i>or</i> BIOS2621, MICR2011	A total of 24 UOC: BIOT3011, BIOT3021, Plus 6-12 UOC from: BIOT3061, BIOT3081 Plus a further 0-6 UOC from: BIOC3111, BIOC3121, BIOC3271, BIOC3281, MICR3051, MICR3071, MICR3041 <i>or</i> MICR3641, MICR3021 <i>or</i> MICR3621

Major Contacts	Stage 1	Stage 2	Stage 3
Chemistry Dr G Moran	CHEM1011 or CHEM1031 CHEM1021 or CHEM1041 12 UOC from Level I Mathematics, 6 UOC from Level I Physics	18 UOC from: CHEM2011, CHEM2021, CHEM2031 or CHEM2839, CHEM2041 Plus a further 6 UOC from Level II/III Chemistry (taken in either Stage 2 or Stage 3)	18 UOC from Level III Chemistry of which 12 UOC must be from: CHEM3011, CHEM3021, CHEM3031, CHEM3041
Ecology BEES Student Office	BIOS1101, BIOS1201, GEOS1701, MATH1041 Also recommended: BIOS1301	BEES2041, BIOS2011 Plus 6 UOC from: BIOS2031, BIOS2051, BIOS2061, GEOS2071, GEOS2711, GEOS2821	24 UOC from: BIOS3011, BIOS3061, BIOS3071, BIOS3081, BIOS3111, BIOS3601, BIOS3161, GEOS3761, GEOH3911
Environmental Earth Science BEES Student Office	GEOS1701, BIOS1101, GEOS1111, GEOS1211 Also recommended: BIOS1301	BEES2041, GEOS2721 Plus 6 units of credit from Level II GEOS courses	GEOH3911, GEOS3281 Plus 12 UOC from Level III GEOS courses
Food Science and Nutrition Prof G Fleet	BIOS1201, CHEM1011, CHEM1021, FOOD1120, FOOD1130, MATH1041 Also recommended: MATH1031, PHYS1111	BIOC2181, FOOD2320, FOOD3220 Also recommended: BIOC2291, CHEM2921, FOOD1230, MICR2201, PHPH2101, PHPH2201	FOOD1370, FOOD3440 Plus 12 UOC from: FOOD1390, FOOD2330, FOOD2340, FOOD2350 Also recommended: CHEM3811
Genetics BABS Student Office	BIOS1101, BIOS1201, CHEM1011 or CHEM1031 CHEM1021 or CHEM1041 MATH1031, MATH1041	BIOS2021 or BIOS2621 Plus 12 UOC from: BIOC2101, BIOC2201, BEES2041*, MICR2011 <i>(*BEES2041 or an approved COMP or MATH course).</i>	A total of 24 UOC: BIOC3151, BIOC3291 Plus 6 or 12 UOC from: BIOC3121, MICR3021 Plus 0 or 6 UOC from: BIOS3071, BIOT3061
Geography (Human) BEES Student Office	GEOH1601, GEOS1701, SLSP1001 or MATH1041	SLSP2001, GEOH2001 Plus 12 UOC from Level II GEOH courses	GEOH3101 or GEOH3111 Plus 18 UOC from Level III GEOH courses
Geography (Physical) BEES Student Office	GEOH1601, GEOS1701, MATH1041 Also recommended: BIOS1301	24 Level II UOC: BEES2041 Plus GEOS2711 &/or GEOS2721 Plus further UOC from Level II GEOS	Choose 24 UOC from: GEOS3731, GEOS3761, GEOS3811, GEOS3821, GEOS4721, GEOH3911, GEOH3921
Geology BEES Student Office	GEOS1111, GEOS1211	BEES2041, GEOS2171, GEOS2181 Plus 6 UOC from: GEOS2071, GEOS2291, GEOS2721	GEOS3131, GEOS3141 Plus 12 UOC from Level III GEOS courses
History and Philosophy of Science Dr A Corones	Up to 12 UOC from: HPSC1100, HPSC1200, HPSC1400, HPSC1500	24 UOC from Level II History and Philosophy of Science, including at least 12 UOC from: HPSC2100, HPSC2150, HPSC2200, HPSC2300, HPSC2400, HPSC2500, HPSC2550	18 UOC from Level III History and Philosophy of Science
Marine Science (Marine Biology) BEES Student Office	BIOS1101, BIOS1201 Also recommended: MATH1041	MSCI2001, MSCI6200, BIOS2031, MICR2201	MSCI3001, BIOS3081, BIOS3091, MICR3071
Marine Science (Marine Geology) BEES Student Office	GEOS1111, GEOS1211	MSCI2001, MSCI6200, GEOS2181, GEOS2721	MSCI3001, GEOS3731 Plus 6 UOC from: GEOS3141, GEOS3281 Plus 6 UOC from Level III GEOS courses.

Major Contacts	Stage 1	Stage 2	Stage 3
Marine Science (Physical Oceanography) School of Mathematics	MATH1131 or MATH1141, MATH1231 or MATH1241, PHYS1121, PHYS1221	MSCI2001, MATH2011, MATH2240, MATH2120, MATH2301	MSCI3001, MATH3121, MATH3241, MATH3261
Materials Science Dr O Standard	MATH1131, MATH1231, PHYS1121, PHYS1221	MATS1172, MATS1262, MATS1002, MATS1112, MATS1142, MATS1282	21 UOC from Level III MATS courses including: MATS1013, MATS1223, MATS2013, MATS3443, MATS4013
Mathematics (See Note 3 above) School of Mathematics	MATH1131, MATH1231 MATH1081	MATH2011, MATH2060, MATH2120, MATH2501, MATH2520, MATH2801	18 UOC from Level III Mathematics
Medical Microbiology and Immunology BABS Student Office	CHEM1011, CHEM1021, BIOS1101, BIOS1201 Plus 6 UOC from: MATH1031, MATH1041	MICR2201, MICR2011, Plus 6 UOC from: ANAT2111, ANAT 2200, BIOC2101 or BIOC2181, BIOC2201 BEES2041, BIOS2021 or BIOS2621, PATH2201, PHPH2101, PHPH2201	A total of 24 UOC: At least 18 UOC from: MICR3041 or MICR3641, MICR3051, MICR3061, MICR3081 Plus 0 - 6 UOC from: MICR3031, MICR3021 or MICR3621, PHPH3121, PHPH3151 or PHPH3551, BIOC3261, BIOC3271, BIOC3291, PATH3205, PATH3206, PHPH3251
Microbiology BABS Student Office	CHEM1011, CHEM1021, BIOS1101, BIOS1201 Plus 6 UOC from: MATH1031, MATH1041	MICR2201, MICR2011 Plus 6 UOC from: BIOS2021 or BIOS2621, BIOC2201	MICR3021 or MICR3621 Plus 12 UOC from: MICR3611, MICR3061, MICR3071, MICR3081 Plus 6 UOC from: MICR3611, MICR3031, MICR3061, MICR3071, MICR3081, BIOS3071 or BIOS3671, BIOT3011 or BIOT3611, BIOT3081, BIOC3121 or BIOC3621, FOOD2480, FOOD2490, CHEM3901
Molecular Biology BABS Student Office	BIOS1101, BIOS1201 CHEM1011 or CHEM1031, CHEM1021 or CHEM1041 Plus 6 UOC from: MATH1031, MATH1041.	MICR2201, MICR2011 or MICR2611, BIOC2101, BIOC2201, BIOS2021 or BIOS2621.	MICR3021 or MICR3621, BIOC3121 or BIOC3621, BIOC3281 Plus 6 UOC from: BIOT3061, MICR3011, BIOC3111, BIOC3271 or BIOC3671
Pharmacology Dr. T Binder	6 UOC from Level 1 Biology (BIOS1201 preferred) Plus 12 UOC from Level I Chemistry, Plus 6 UOC from Level I Mathematics (MATH1041 excluded)	PHPH2011 (also compulsory for Minor), PHPH2101, PHPH2201 Plus 12 UOC from BIOC2101 or BIOC2181, BIOC2201 or BIOC2291, CHEM2021, CHEM2041	PHPH3251 (also compulsory for Minor), PHPH3101 Plus 12 UOC from: PHPH3121, PHPH3131, PHPH3211, PHPH3221, BIOC3261, BIOC3111, BIOC3121, CHEM3021, CHEM3901
Philosophy Dr M Michael	6 UOC from Level I Philosophy	18 UOC from PHIL2100 courses and above	24 UOC from Level II/III Philosophy

Major Contacts	Stage 1	Stage 2	Stage 3
Physical Oceanography/Meteorology School of Mathematics	MATH1131, MATH1231, PHYS1121, PHYS1221, MATH1081	MATH2011, MATH2060, MATH2120, MATH2240, MATH2301, PHYS2810 Plus 3 UOC from Mathematics or Physics	MATH3121, MATH3241, MATH3261
Physics Ms S Hagon A/Prof G Morriss	MATH1131, MATH1231, PHYS1121, PHYS1221	PHYS2050, PHYS2060, PHYS2040, PHYS2030 Plus 12 UOC from Level II or Level III Physics. Also recommended: MATH2011, MATH2120	18 UOC from Level III Physics.
Physiology Dr L Ulman	6 UOC from Level I Biology (BIOS1201 preferred) Plus 6 UOC from Level I Chemistry Plus 6 UOC from Level I Mathematics (MATH1041 excluded).	PHPH2101, PHPH2201, Highly recommended: BIOC2101 <i>and</i> BIOC2201 or BIOC2181 <i>and</i> BIOC2291	A total of 24 UOC: At least 18 from: PHPH3121, PHPH3131, HPH3211, PHPH3221 Plus 0 – 6 from: PHPH3101, PHPH3251, BIOC3261, BIOC3271, BIOC3111, BIOC3121, MICR3041, MICR3051, PATH3205, PATH3206, PATH3207 or any Level III Anatomy course.
Psychology Mr T Clulow Dr M Gleitzman	PSYC1001, PSYC1011	PSYC2001 Plus 18 UOC from: PSYC2061, PSYC2071, PSYC2081, PSYC2101.	PSYC3001 Plus 18 UOC from Level III Psychology courses (from at least two elective groups)
Safety Science Dr A Green	SESC1001 Plus 12 UOC from Level I Mathematics.	ANAT2151, MATH2839* SESC2091, MGMT2721. <i>* MATH2839 or other approved statistics course</i>	SESC3101, SESC3541, SESC3601, SESC4310 Plus additional Level II or III SESC courses to total 42 UOC.
Spatial Information Systems BEES Student Office	GEOS1211, GEOS170, MATH1041 Also recommended: BIOS1101, BIOS1301	BEES2041, GEOS2811, GEOS2821	GEOS3811, GEOS3821 Plus 12 UOC from Level III GEOS courses
Statistics School of Mathematics	MATH1131, MATH1231, MATH1081.	MATH2060, MATH2501, MATH2011 or MATH2510, MATH2801, MATH2810, MATH2831.	MATH3801, MATH3811, MATH3821
Toxicology A/Prof C Winder	BIOS1201, BIOS1101, CHEM1011, CHEM1021, MATH1031, MATH1041, SESC1001	BIOC2181 <i>or</i> BIOC2101, BIOC2291 <i>or</i> BIOC2201, CHEM2021, SESC2091, PHPH2011 Recommended: BIOS2021, further Level II CHEM, PHPH2101, PHPH2201.	CHEM3901, SESC4820, SESC4850 Recommended: PHPH3251, PHPH3101, SESC3101, BIOC3261, BIOC3121, further Level III CHEM
Vision Science Dr Peter Herse	VISN1211, VISN1231 Also recommended: BIOS1101, BIOS1201, CHEM1031, CHEM1829, MATH1131, PHYS1121, PSYC1011	24 UOC from: VISN2111, VISN2131, VISN2211, VISN2231, PSYCH2071	18 UOC from: VISN3111, VISN3131, VISN3211, PSYCH3221

Table B: Minors Offered in the Bachelor of Science Program (3970)

Minor	Stage 1	Stage 2	Stage 3
Please note: In addition to the Minors listed below, 24 units of credit taken at Level II or III in any Major listed in Table A will also satisfy the requirements of a Minor.			
Australian Studies Chinese Studies Cognitive Studies Development Studies Education English Environmental Studies European Studies Film French German Studies Greek (Modern) History History and Philosophy of Science Indonesian Studies Japanese Studies Jewish Studies Korean Studies Linguistics Media, Culture and Technology Music Philosophy Political Economy Politics and International Relations Policy Studies Sociology and Anthropology Spanish and Latin American Studies Theatre Studies Women's and Gender Studies	All Minors from the Faculty of Arts and Social Sciences require a total of 24 upper level units of credit from a particular School. Note: No more than 12 units of credit of level 1 courses may be taken in any one of these Minors.		
Accounting	ACCT1501, ACCT1511	24 Level II or III UOC in Accounting courses.	
Aviation	AVIA1321, AVIA1900, AVIA1850	24 UOC from: AVIA2110, AVIA2200, AVIA1700, AVIA2400, AVIA2500, AVIA2700, AVIA2800, AVIA3101, AVIA3400, AVIA3710,	
Biomechanics	12 UOC of Level 1 Maths	SESC2451, ANAT2511	BIOM9510, SESC3451
Biological Anthropology	BIOS1101	18 UOC from: ANAT2610, ANAT2611, ANAT3601, ANAT3611 Plus 6 UOC from any other Level II or III course in Anatomy or Biological Anthropology or 6 UOC from courses in Biological Science, Geology/Geography or Social Anthropology listed under "Biological Anthropology" in Table A.	
Botany	BIOS1101, BIOS1201, also recommended: BIOS1301	BIOS2011, BIOS2051	BIOS3061, MICR3071
Business Economics	ECON1101, ECON1102	24 Level II or III UOC in Business Economics courses.	
Business Law and Taxation		24 Level II or III UOC in Business Law and Taxation	
Business Statistics	ECON1101, ECON1102	24 Level II or III UOC in Business Statistics courses.	

Minor	Stage 1	Stage 2	Stage 3
Chemical Engineering and Industrial Chemistry	To be advised	24 Level II or III UOC in Chemical Engineering or Industrial Chemistry courses	
Civil Engineering	CVEN1023, CVEN1026, CVEN1024	CVEN2023 Plus 21 UOC from: CVEN0646, CVEN0656, CVEN2026, CVEN2125, CVEN2126, CVEN2322, CVEN2525, CVEN3126, CVEN3224, CVEN3438, CVEN3448, CVEN3525, CVEN4533, CVEN4722, INDC4120, CEIC0050.	
Computing	COMP1011	COMP2811, COMP2011	COMP2121, COMP2041
Ecology	BIOS1101, BIOS1201 Also recommended: BIOS1301	GEOS2711 and/or BIOS2011 May include 6 UOC from BIOS2031, BIOS2051, BIOS2061, GEOS2071 for a total 12 UOC of Level 2 courses	BIOS3111 Plus 6 UOC from: BIOS3071, BIOS3081, BIOS3091, GEOS3761
Economic History		24 Level II or III UOC in Economic History courses	
Electrical Engineering & Telecommunications	ELEC1011	ELEC2031, ELEC2032	18 UOC from one of the following groups: Group one: Choose three from these courses - ELEC3004, ELEC3014, ELEC3041, ELEC3006, ELEC3016 Group two: TELE3013, TELE4352, TELE3018
Finance		24 Level II or III UOC in Finance courses	
Human Resource Management		24 Level II or III UOC in Human Resource Management courses	
Industrial Relations		24 Level II or III UOC in Industrial Relations courses	
Information Systems		24 Level II or III UOC in Information Systems courses	
International Business		24 Level II or III UOC in International Business courses	
Marketing		24 Level II or III UOC in Marketing courses	
Mechanical and Manufacturing Engineering		MECH2611, MECH2711, MECH2612, MECH2712	MECH3601, MECH3602 or an alternative sequence of 24 UOC at Level II or III with the approval of the Head of School
Pathology		PATH2201	PATH3205, PATH3206, PATH3207
Pharmacology		PHPH2011, PHPH3251 plus 12 UOC from any Level II or III Physiology, Pharmacology, Biochemistry, Chemistry	
Planning	PLAN1241, PLAN1042	24 UOC from Level II and III PLAN courses	
Remote Sensing		GEOS2811, GEOS2821	GEOS3811, GEOS3821
Science Communication	SCOM1021 (or SCOM2014)	SCOM 2014, SCOM2021 Plus 12 Level II or III UOC in SCOM electives (e.g. Internship, HPSC, PSYC, MARK) Refer to the Science Communication Office for appropriate selection.	
Surveying and Spatial Information Systems	One of GMAT0411, GMAT0442, GMAT0443	24 Level II or III UOC in Surveying and Spatial Information Systems courses	
Zoology	BIOS1101, BIOS1201 Also recommended: BIOS1301	BIOS2031, BIOS2061	12 UOC from: BIOS3011, BIOS3021, BIOS3081, BIOS3111

Study Plans in Advanced Science

Anatomy

Anatomy is the study of the structure of the human body. The word 'anatomy' is derived from the Greek, and means 'cutting up' or 'dissection'. However, anatomy today is much more than the descriptive study of the dissected body, although dissected specimens are still used for research and instruction. The study of anatomy now embraces separate but strongly related disciplines. Gross Anatomy deals with the description of form, arrangement and function of the bones, joints, muscles and internal organs, together with their blood and nerve supply. Histology deals with the microscopic structure of tissues and cells. Embryology is concerned with the normal development of the embryo and fetus from conception to birth and with the mechanisms of development and malformations. Neuroanatomy deals with the internal organisation and functions of the brain and spinal cord. Biological Anthropology involves applying biological principles and approaches to the study of humans and non-human primates. In all courses in anatomy, strong emphasis is given to the functional significance of the structures in health and in disease. Advanced anatomy courses may include affiliation with a research project and a project evaluation report and, in some courses, an assessable dissection program.

A major in Anatomy may be combined with elective courses in Biochemistry, Physiology, Microbiology, Pathology or Psychology.

Anatomy

Stage 1

BIOS1101, BIOS1201

CHEM1011 or CHEM1031

CHEM1021 or CHEM1041

Choose at least 6 units of credit from Level I Mathematics courses.

Elective courses totalling 12 units of credit

LIFE1001

One General Education course totalling 3 units of credit.

Stage 2

Level II Anatomy courses totalling at least 18 units of credit from:

ANAT2111, ANAT2210, ANAT2310, ANAT2601, ANAT2611,

ANAT2241, ANAT2341.

Elective courses totalling 24 units of credit.

Recommended: Biological Science, Biochemistry, Physiology, Microbiology, Pharmacology, Microbiology, Pathology, Psychology, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

Level III Anatomy courses totalling at least 18 units of credit from:

ANAT3121, ANAT3131, ANA3141, ANAT3231, ANAT3411,

ANAT3421, ANAT3601, ANAT3611

General Education courses totalling 6 units of credit

Further level III courses from Biological Science, Biochemistry, Microbiology, Pathology, Physiology, Pharmacology to give a total of 48 units of credit.

Students proposing to proceed to Stage 4 (Honours) must complete Level III courses totalling 36 units of credit.

Stage 4 (Honours)

ANAT4508

Biochemistry

The Biochemistry plan is closely allied to the Genetics plan and the Molecular Biology plan (see later) all of which are concerned with understanding life processes at the level of molecular structure, function and interaction. The Biochemistry plan therefore provides a knowledge base and a broad range of specialised techniques, which are relevant to all biology. The major impact of this discipline is largely at the molecular level and is ideal for those students whose interests are in understanding and appreciating biological processes at the molecular rather than the descriptive level. Integration of these molecular approaches at the cellular, tissue and whole organism level is an increasingly important part of biochemistry. This discipline is also the foundation of medical science and is playing an increasingly important role in many aspects of modern medicine. The Biochemistry plan (see below) provides opportunities to combine biochemistry with other related discipline areas through careful choice of elective courses in Stages 2 and 3 of the plan.

Biochemistry*

Stage 1

BIOS1101, BIOS1201

CHEM1011 or CHEM1031

CHEM1021 or CHEM1041

Choose at least 6 units of credit from:

MATH1031, MATH1041**

Elective courses totalling 12 units of credit

(Recommended: Physics)

LIFE1001

One General Education course totalling 3 units of credit

Stage 2

BIOC2101* and BIOC2201*

LIFE2001

Choose 6 units of credit from:

BIOS2021 or BIOS2621, CHEM2021, CHEM2041, MICR2011

Elective courses totalling 24 units of credit

One General Education course totalling 3 units of credit

Stage 3

Choose 12 or 18 units of credit from:

BIOC3111, BIOC3261, BIOC3271

Choose 0 – 12 units of credit from:

BIOC3121, BIOC3281

Choose 0 – 6 units of credit from:

ANAT3231, BIOC3301, BIOT3061, CHEM3021, CHEM3041,

MICR3041, MICR3641, PHPH3211, PHPH3221

Elective courses totalling 18 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

BIOC4318

**At least two of the Stage 2 and two of the Stage 3 courses contributing to the major in Biochemistry must be taken at the advanced level.*

***Other higher level study plan Mathematics courses may be substituted.*

Biological Science

Biological Science encompasses all aspects of plants and animals including their relationship to each other and to the environment. The areas of study leading to the award of a science degree in Biological Science include cell biology, plant and animal physiology, ecology, genetics, taxonomy, marine biology and evolutionary studies. These studies are particularly relevant in the fields of agriculture, forestry, wildlife management, conservation and related environmental sciences. Within Advanced Science there are two plans available: Biological Science and Ecology.

Biological Science

Staff Contact: Associate Professor I Suthers

Stage 1

BIOS1101, BIOS1201, BIOS1301

CHEM1011

MATH1041

Elective courses totalling 12 units of credit

LIFE1001

One General Education course totalling 3 units of credit

Stage 2

BIOS2011, BIOS2621, BEES2041,

LIFE 2001

Choose 6 units of credit from:

BIOS2031, BIOS2051, BIOS2061

One General Education course totalling 3 units of credit

Elective courses totalling 18 units of credit.

(Recommended: BIOS2031, BIOS2051 and BIOS2061)

Stage 3

Level III Biological Science courses totalling 36 units of credit, including advanced courses where available.

General Education courses totalling 6 units of credit

Elective courses totalling 6 units of credit.

Stage 4 (Honours)

Required course material comprises:

BEES4521 Literature Review

and

24 UOC project courses from the list below:

BIOS4514 Biological Science Honours B

BIOS4515 Biological Science Honours B

BIOS4516 Biological Science Honours B
 BIOS4518 Biological Science Honours B
 or

BIOS4524 Botany Honours B
 BIOS4525 Botany Honours B
 BIOS4526 Botany Honours B
 BIOS4528 Botany Honours B
 or

BIOS4534 Zoology Honours B
 BIOS4535 Zoology Honours B
 BIOS4536 Zoology Honours B
 BIOS4538 Zoology Honours B
 and

12 UOC Biology courses at Stage 3 (not completed previously) or other Science courses approved by the Honours Coordinator.

Ecology

Staff Contact: Associate Professor I Suthers

Stage 1

BIOS1101, BIOS1201, BIOS1301
 CHEM1011
 MATH1041
 LIFE1001

One General Education course totalling 3 units of credit
 Elective courses totalling 12 units of credit

Stage 2

BIOS2011, BEES2041
 LIFE2001

Choose 6 units of credit from: BIOS2031, BIOS2051, BIOS2061
 One General Education course totalling 3 units of credit
 Elective courses totalling 24 units of credit.
 (Recommended: BIOS2031, BIOS2051, BIOS2061 and BIOS2621)

Stage 3

Choose courses totalling 36 units of credit from:
 BIOS3601, BIOS3011, BIOS3061, BIOS3071, BIOS3081, BIOS3091,
 BIOS3111, BIOS3671, BIOS3681
 Where ordinary and advanced options exist for the same course
 students are advised to take the advanced option.
 Elective courses totalling 6 units of credit
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

Entry requires the completion of Stages 1–3 of the Advance Science plan in Ecology or Biological Science.

Required course material comprises:

BEES4521 Literature Review
 and

24 UOC project courses from the list below:

BIOS4544 Ecology Honours B
 BIOS4545 Ecology Honours B
 BIOS4546 Ecology Honours B
 BIOS4548 Ecology Honours B
 and

12 UOC Biology courses at Stage 3 (not completed previously) or other Science courses approved by the Honours Coordinator.

Biotechnology

Biotechnology can be defined as the use of various biological processes to make products and perform services. The essential feature of biotechnology therefore is the use of biological processes based on living cells and biochemical macro-molecules such as proteins, DNA and RNA in a rapidly expanding range of activities of benefit to mankind. As such, biotechnology makes practical use of the recent scientific advances in areas such as molecular genetics.

The development of recombinant-DNA (r-DNA) technology has resulted in the ability to produce large quantities of any potentially useful product. Based on this technology, a new generation of biopharmaceuticals, including hormones, vaccines, anti-hypertensive and anti-inflammatory agents, are being developed which have the potential to revolutionise medicine. Microorganisms and viruses are being modified for use in controlling plant and animal diseases and pests. Diagnostic kits are being developed for use in forensic science and in product identification and quality control. In addition, genetic improvements in agriculture, plants and animals are becoming a reality, as is the control of inborn genetic disorders in humans.

Some aspects of biotechnology are traditional, having been used for centuries. The first makers of bread, cheese and fermented beverages over six thousand years ago were applying biotechnological principles in processing these goods. Without understanding the processes they were operating, they were in fact making use of catalysis mediated by microbial cells. Such processes are still in use today and scientific advances now allow for much greater control of the processes with resultant improvements in quality and economics of production. The number of such biological processes has also expanded and enzymes and/or microorganisms are used in the production of a wide range of fermented foods (such as cheese, wine, beer, soy sauce, sauerkraut, yoghurt, tofu, kefir) and in the production of flavouring, colouring and sweetening agents.

Bioprocesses are also used in the extraction of minerals from low-grade ores, and modified and novel bioprocesses are being developed for the treatment of waste and degradation of recalcitrant molecules, an area of vital importance in our increasingly polluted planet.

The future for expansion in all the above areas is immense and an ability to cope with the problems of the 21st century will be heavily dependent on these advances.

Biotechnology*

Stage 1

BIOT1011, BIOS1201
 CHEM1011, CHEM1021
 LIFE1001

One General Education course totalling 3 units of credit
 Choose at least 6 units of credit from: MATH1031, MATH1041
 Choose electives to make a total of 48 units of credit for Stage 1
 (Recommended: PHYS1111)

Stage 2

BIOC2101*, BIOC2201*
 MICR2201
 LIFE2001

One General Education course totalling 3 units of credit
 Choose elective courses totalling 24 units of credit
 (Recommended: BIOS2021 or BIOS2621, MICR2011)

Stage 3

Choose at least 18 units of credit from: BIOT3011, BIOT3061,
 BIOT3021, BIOT3081
 Choose elective courses totalling 24 units of credit
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

BIOT4073 (Full-Time)
 BIOT4083 (Part-Time)

**At least two of the level II and two of the level III courses contributing to the major must be taken at advanced level.*

Chemistry

Within Advanced Science there are two plans available: Chemistry, and Medical Chemistry. Both plans provide a broad scientific education and a professional training in the chemical sciences. Fundamental, applied, environmental and industrial aspects of chemistry may be included by the appropriate choice of courses.

Chemistry

The Chemistry plan is designed for students who wish to specialise in the chemical sciences and undertake the maximum number of chemistry courses. It is designed to provide education and training in all contemporary fields of chemistry and should be selected by students who wish to devote the majority of their studies at Stage 3 to Chemistry.

Within this plan there are sufficient electives available to complete the equivalent of a minor in another discipline. The School of Chemistry recommends the following discipline areas: Biochemistry, Biotechnology, Computing, Food Science and Nutrition, Geoscience, Materials Science, Mathematics, Physics. Other areas are available both within and outside the Faculty of Science. These possibilities should be discussed with an advisor from the School.

Inclusion of advanced level studies, from more than one field of specialisation, result in a broadly based degree in the chemical sciences. For example, a combination of Chemistry and Biochemistry leads to further work in areas such as Toxicology and Neurochemistry. Combining Level III Chemistry with Mathematics or Computing provides a valuable basis for the many applications of computers in Chemistry. Chemistry with Physics or Materials Science allows entry into the rapidly developing field of Advanced Materials.

Stage 1

CHEM1031, CHEM1041*
 MATH1131 or MATH1141 or MATH1031
 MATH1231 or MATH1241 or MATH1041
 Choose 6 units of credit from Level I Physics
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001
 One General Education course totalling 3 units of credit
 Elective courses totalling 12 units of credit

Stage 2

CHEM2011, CHEM2021, CHEM2031, CHEM2041
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
 Elective courses totalling 12 units of credit
 General Education courses totalling 9 units of credit

Stage 3

CHEM3011, CHEM3021, CHEM3031, CHEM3041
 Choose further Level III chemistry courses totalling 12 units of credit
 Elective courses totalling 12 units of credit

Stage 4 (Honours)

CHEM4003

**Students without the assumed knowledge for these courses may substitute CHEM1011 and CHEM1021*

Medical Chemistry

This program combines a strong knowledge of synthetic and analytical chemistry and aspects of biochemistry or pharmacology. The program is designed to produce graduates whose background in both chemical and biological areas is appropriate to the requirements of employers in Australia.

Stage 1

CHEM1031, CHEM1041*
 BIOS1101, BIOS1201
 MATH1031 or MATH1131 or MATH1141
 MATH1041 or MATH1231 or MATH1241
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001
 One General Education course totalling 3 units of credit
 Elective courses totalling 6 units of credit

Stage 2**

CHEM2011, CHEM2021, CHEM2031, CHEM2041
 BIOC2101 or BIOC2181
 Choose further specialisation in either physiology, pharmacology, biochemistry, molecular biology
 BIOC2201 or BIOC2291
 Plus elective courses totalling 6 units of credit
 or
 PHPH2102 and PHPH2201
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
 One General Education course totalling 3 units of credit

Stage 3

CHEM3021, CHEM3041
 Further specialisation in either physiology, pharmacology, biochemistry, molecular biology, as follows:
 12UOC from Level III Physiology or Level III Pharmacology according to choice of Level II prerequisites
 or
 Courses totalling 12 units of credit from Level III biochemistry and MICR3041
 Elective courses totalling 18 units of credit
 General Education courses totalling 6 units of credit

Stage 4

CHEM4003
 Joint supervision of Honours projects between the School of Chemical Sciences and either the Department of Physiology & Pharmacology or the School of Biotechnology & Biomolecular Sciences is strongly encouraged.

**Students without the assumed knowledge for these courses may substitute CHEM1011 and CHEM1021*

*** CHEM2839 may be substituted for CHEM2031.*

Food Science and Technology

Food Science and Technology involves the understanding of basic sciences and the application of this knowledge to foods from the point of production, through handling, processing, preservation, distribution and marketing, up to consumption and utilisation by consumers. It is concerned with food processes, food commodities, food composition and food quality (including sensory properties, safety and nutritional value).

The study of Food Science and Technology integrates many scientific disciplines. Its bases are in chemistry, physics, biochemistry and microbiology. Its borders merge with those of agriculture, engineering, human nutrition, public health, commerce, psychology and law. Biotechnology has a role of increasing importance in food science and technology.

The food scientist and food technologist are concerned with food supplies and requirements, community wants and needs, and equitable distribution of foods to ensure human nutritional needs are met.

New knowledge is acquired in the laboratory, the pilot plant and the community, and then applied to the development of safe, nutritious and palatable foods, beverages and food ingredients by optimisation of processes and equipment. Foods are studied in terms of their basic constituents and structures and the changes they undergo when subjected to handling, processing and distribution.

The food scientist and food technologist are equally concerned with the development and selection of raw materials from agricultural, horticultural, animal and marine sources.

A safe, adequate, palatable and nutritious food supply is essential to human health. The food and beverage industry is of major economic importance and is the largest sector of manufacturing industry in Australia. Internationally, food production, processing and service are among the largest and most stable industries. The challenges are to increase the availability, variety, quality and quantity of foods economically and in line with the needs of the world population. Australian industry has a major role to play in supplying high quality foods to overseas markets and there is a national and international demand for professionally trained people prepared to accept responsibility for the quality and safety of food.

These programs provide basic preparation for food science and technology careers in the food industry, the public sector, education, research, the food service industry, public health, management and marketing. Graduates may also find careers in health and environmental sciences, management of food resources and food wastes, and communication, and in areas such as dietetics after further training.

Undergraduate training in the Food Science and Technology plan is administered through the Science Student Centre. The BSc program is three stages for a Pass degree during which students can study aspects of food science and technology in combination with other courses in a relevant discipline, preferably biochemistry, microbiology, biotechnology or chemistry. The fourth Honours Stage of the BSc program involves an extensive research project.

Food Science and Technology**Stage 1**

BIOS1201
 CHEM1031, CHEM1041*
 FOOD1130 or BIOS1101**
 MATH1031, MATH1041
 or one of MATH1131, MATH1141
 and one of MATH1231, MATH1241
 LIFE1001
 One General Education course totalling 3 units of credit
 PHYS1111 or PHYS1201

Stage 2

BIOC2101 or BIOC2181
 BIOC2201 or BIOC2291
 CHEM2921
 LIFE2001
 MICR2201
 General Education courses totalling 9 units of credit
 Elective courses totalling 12 units of credit
 (Recommended: FOOD1230, FOOD2320, FOOD3220)

Stage 3

FOOD1360, FOOD1370, FOOD1390
 Elective courses totalling 30 units of credit
 (Recommended: FOOD1380, FOOD1490, FOOD2330, FOOD2340, FOOD2350, FOOD2480, FOOD3440, FOOD4450)

Stage 4 (Honours)

FOOD9420

**Students without the assumed knowledge for these courses may substitute CHEM1011 and CHEM1021*

***Students planning to take BIOC2101 must choose BIOS1101 at Stage 1.*

Genetics

The Genetics plan is broadly based and offers a general introduction to the discipline during the first two years of study. The plan allows students in Stage 3 to diversify into the more specialised areas of genetics, including molecular genetics, human genetics, plant and microbial molecular biology, conservation biology, etc. The flexibility of this plan therefore allows students the scope to combine genetics with a number of other courses offered by the different schools within the Faculty of Science so that Stage 4 (Honours) may be completed in any of these schools provided that suitable Genetics Honours projects are offered.

Genetics***Stage 1**

BIOS1101, BIOS1201

CHEM1011 or CHEM1031

CHEM1021 or CHEM1041

Choose at least 6 units of credit from:

MATH1031**, MATH1041**

Elective courses totalling 12 units of credit

(Recommended: Physics)

LIFE1001

One General Education course totalling 3 units of credit

Stage 2

BIOS2621

LIFE2001

Choose 12 units of credit from:

BIOC2101, BIOC2201, BEES2041, MICR2011

Elective courses totalling 24 units of credit

One General Education course totalling 3 units of credit

Note: BEES2041 may be replaced with MATH2841 or another MATH or COMP course as approved by the study plan coordinators

Stage 3

BIOC3291, BIOC3151

Choose 6 or 12 units of credit from:

BIOC3121 or BIOC3621, MICR3021 or MICR3621

Choose 0 or 6 units of credit from:

BIOC3301, BIOS3071, BIOT3061

Elective courses totalling 18 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

BIOC4103

**At least two of the Stage 2 and two of the Stage 3 courses contributing to the Genetics Study Plan must be taken at the advanced level.*

***Other higher Level 1 Mathematics courses may be substituted.*

Geoscience

The School of Biological, Earth and Environmental Sciences offers the following study plan within Advanced Science.

Geoscience**Stage 1**

GEOS1701, GEOS1111, GEOS1211

MATH1041

CHEM1011 and PHYS1111

Elective courses totalling 6 UOC

3 UOC from Table X*

3 UOC General Education courses

Stage 2

BEES2041

24 UOC from Level II GEOS courses

12 UOC of elective courses

3 UOC from Table X*

3 UOC General Education courses

Stage 3

36 UOC from Level III GEOS courses

6 UOC elective courses

6 UOC General Education courses

Stage 4

BEES Honours program in Geology or Physical Geography

BEES4511 Professional Skills

and either

24 UOC project from GEOL4204, 4205, 4206, 4207 plus elective courses totalling 18 UOC from BEES4521, Level III Courses in Geology (GEOS) or other science courses at Levels II to IV (not completed previously) and approved by the Honours coordinator.

or

24 UOC from GEOS4418, 4417, 4416, 4415 plus elective courses totalling 8 UOC from BEES4521, Level III courses in Physical Geography (GEOS) or other science courses at Levels II to IV (not completed previously) and approved by the Honours coordinator.

** Please refer to the program entry for 3972 Advanced Science under 'Program Rules and Information'.*

Marine and Coastal Studies

The Marine and Coastal Studies Study Plan allows specialisation in selected areas of marine science, yet also includes adequate exposure to other pertinent disciplines.

Marine and Coastal Studies**Stage 1**

BIOS1101, BIOS1201

GEOS1111, GEOS1211

MATH1041

LIFE1001, MATH1000

Elective courses totalling 12 units of credit

(Recommended: BIOS1301 MATH1031, GEOH1601, GEOS1701,

CHEM1011, PHYS1201)

Stage 2

MSCI2001, MSCI6200

BIOS2031,

GEOS2721

General Education courses totalling 6 units of credit

Elective courses totalling 18 units of credit

(Recommended: BIOS2011, BEES2041, GEOS2711, GEOS2811,

GEOS2821, GEOS2181, GEOS2291, MICR2201)

Stage 3

MSCI3001, GEOS3731

BIOS3681, BIOS3091

General Education courses totalling 6 units of credit

Elective courses totalling 18 units of credit

(Recommended: BIOS3671, BIOS3111, GEOS3761, GEOS3811,

GEOH3911, GEOH3921, GEOS3281, MICR3071)

Stage 4 (Honours)

MSCI4003 (Full-Time)

MSCI4009 (Part-Time)

Materials Science

The School of Materials Science and Engineering offer the following Study Plan.

Materials Science**Stage 1**

MATS1111, MATS1021

MECH0440

CHEM1011, CHEM1021

MATH1131 or MATH1141

MATH1231 or MATH1241

PHYS1121, PHYS1221

One course from: MATH1000, PHYS1000, CHEM1000, LIFE1001

Stage 2

MATS1172, MATS1282, MATS1242, MATS1262

MATH2049, MATH2059

CHEM2011 and CHEM2021 or CHEM2031

PHYS2030

General Education courses totalling 6 units of credit

Stage 3

MATS1013, MATS1112, MATS1414

MATS2013, MATS3443, MATS4013

PHYS3020 and PHYS3080, PHYS3310

One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001,

LIFE2001

Elective courses totalling 12 units of credit General Education courses totalling 6 units of credit

Stage 4

MATS4444

Mathematics

The School is divided into Departments of Pure Mathematics, Applied Mathematics, and Statistics. It offers an Advanced Science Study Plan in each of these areas and also plans in Physical Oceanography/Meteorology, in Mathematics and Computer Science (in conjunction with the School of Computer Science) and in Mathematics and Finance (in conjunction with the Faculty of Commerce). There is also a plan in "Advanced Mathematics" that allows for more flexibility in choice of courses. Entry into this plan is by invitation only.

Note: In all Advanced Science Study Plans in Mathematics, all courses are at the higher level where that is available. Any student wishing to take these higher courses at the ordinary level will need to make a formal application to vary their program.

In all these plans, except Mathematics and Finance, Stage 4 is a special Honours year. For entry to the Honours year, students will normally be required to have a Credit average in their Level III Mathematics courses. They will also need to have permission from the Head of the appropriate Department or from the Head of School. In order to receive this permission, students will normally be expected to have included a significant number of higher level courses among the courses they study in the earlier stages of the plan. To ensure that they will be eligible for entry to the Honours year, students should discuss their choice of Level III courses with the Head of the appropriate Department.

The Mathematics and Finance plan is a four-year plan in which Honours may be awarded on the basis of a weighted average of all courses studied in the plan.

Pure Mathematics is the study of the essential structures of mathematics. Work by pure mathematicians underpins most of the technological advances of this century. Pure Mathematics is concerned with problems and techniques which transcend specific applications. Research, focussing on the development of existing theories or the creation of new ones, may be driven by applications or by the internal demands of the discipline. Pure Mathematics courses provide the insights and understanding required by those using mathematics, leading to mastery of the fundamental processes of mathematical science and the capacity for innovative applications in any area.

Applied Mathematics concerns the development of mathematics and models for understanding scientific phenomena, for the solution of technical and industrial problems, and for use in the social, economic and management sciences. Courses are designed to provide basic mathematical and computational skills needed for a wide range of applications, to develop the capability to construct, analyse and interpret mathematical models, and to encourage enthusiasm for the role of the mathematician in a variety of contexts.

Statistics is the science and art of using factual material for modelling and inference. Its mathematical foundations are in the theory of probability and it deals with how to estimate and make decisions using knowledge which is uncertain or observational material which is subject to error. There is a rich interplay of ideas between the theory of statistics and fields such as engineering, medicine and biological and behavioural sciences where statistical problems constantly arise.

Choosing electives

The following information is provided to assist students in choosing their elective courses. Students who intend to proceed to Stage 4 (Honours) should consult with the relevant department in the School of Mathematics before making a final choice of Level III courses.

Pure Mathematics

Pure Mathematics courses relevant to the mathematical aspects of Computer Science are MATH2400 in Stage 2, and MATH3411 and MATH3421 in Stage 3.

Pure Mathematics courses relevant to mathematics teaching are MATH3511, MATH3521, MATH3531, MATH3560 and MATH3570 in Stage 3, or their higher equivalents.

Pure Mathematics courses relevant to the applications of mathematics in physics or engineering are MATH3531, MATH3541 and MATH3570 in Stage 3, or their higher equivalents.

Applied Mathematics

It is recommended that students in the Applied Mathematics plan should include the following among their electives.

Level II: At least 6 units of credit from: MATH2140, MATH2240, MATH2260, MATH2280

Level III: At least three of: MATH3101, MATH3121, MATH3161, MATH3181, MATH3201, MATH3241, MATH3261, MATH3301.

In addition, the following recommendations are made for Stage 1 of the Applied Mathematics plan.

For students interested in physical sciences or theoretical oceanography, meteorology or fluid dynamics: PHYS1121 and PHYS1221.

For students interested in social or biological sciences, at least 12 units of credit from the following: BIOS1101 and BIOS1201; PSYC1001 and PSYC1011; PHYS1121 and PHYS1221; CHEM1011 and CHEM1021.

For students interested in computational methods or computer science: COMP1091 or COMP1791.

Applied Mathematics

Stage 1

MATH1141

MATH1241

MATH1000

MATH1081

Courses totalling 6 units of credit from Science schools other than Mathematics

Elective courses totalling 18 units of credit

One General Education course totalling 3 units of credit

Stage 2

MATH2060

MATH2111

MATH2130

MATH2601

MATH2620

MATH2901

MATH2301

Elective courses totalling 9 units of credit

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

Level III Applied Mathematics courses totalling 24 units of credit

Further Mathematics courses totalling 12 units of credit

Elective courses totalling 6 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4103 or MATH4104

Mathematics and Computer Science

Stage 1

COMP1011, COMP1021

MATH1141

MATH1241

MATH1000, MATH1081, MATH2400

Elective courses totalling 9 units of credit

One General Education course totalling 3 units of credit

Stage 2

MATH2111

MATH2601

COMP2011, COMP2121, COMP2041

Further Level II Mathematics courses totalling 6 units of credit.

Level III Computer Science courses totalling 6 units of credit

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

MATH3301 or MATH3101

MATH3411

Further Level III Mathematics courses totalling 6 units of credit

Level III or IV Computer Science courses totalling 18 units of credit

Plus either

Further level III Mathematics courses totalling 6 units of credit (if proceeding to MATH4003)

or

Further level III or IV Computer Science courses totalling 6 units of credit (if proceeding to Honours Computer Science General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4003 or Honours Computer Science

Statistics**Stage 1**

MATH1141
MATH1241
MATH1000
MATH1081

Courses totalling 6 units of credit from Science Schools other than Mathematics

Elective courses totalling 18 units of credit

One General Education course totalling 3 units of credit

Stage 2

MATH2060
MATH2111
MATH2130
MATH2601
MATH2620
MATH2901
MATH2910
MATH2931

Elective courses totalling 6 units of credit

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

MATH3901
MATH3911
MATH3821

Level III Statistics courses totalling 6 units of credit

Further Mathematics courses totalling 12 units of credit

Elective courses totalling 6 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4903 or MATH4904

Mathematics and Finance**Stage 1**

ACCT1501
COMP1091
ECON1101, ECON1102
MATH1000
MATH1151
MATH1251
FINS1612

One General Education course totalling 3 units of credit

Stage 2

MATH2111
MATH2130
MATH2601
MATH2901
MATH2910
MATH2931
ACCT1511
FINS1613

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

MATH2060
MATH 3311

Further level III Mathematics courses totalling 6 units of credit*

A further level II or III Mathematics course totalling 3 units of credit*

FINS2624, FINS3616

Further level III Finance courses totalling 6 units of credit

Elective courses totalling 6 units of credit

General Education courses totalling 6 units of credit

Stage 4

MATH4012

Further level III Mathematics courses totalling 12 units of credit*

FINS3635

Further level III Finance courses totalling 6 units of credit

Elective courses totalling 12 units of credit

**It is recommended that the choice of Mathematics courses in Stages 3 and 4 include at least 6 units of credit from each of the following 3 groups:*

1. (Computing) MATH3101, MATH3041, MATH3821

2. (Modelling) MATH2140, MATH2260, MATH3161, MATH3181, MATH3201, MATH3641, MATH3901, MATH3941, MATH3980

3. (Statistics) Level III Statistics

Physical Oceanography/Meteorology**Stage 1**

MATH1141
MATH1241
MATH1000
MATH1081

PHYS1121 or PHYS1131, PHYS1221 or PHYS1231

Elective courses totalling 12 units of credit

One General Education course totalling 3 units of credit

Stage 2

MATH2060
MATH2111
MATH2130
MATH2620
MATH2901
MATH2301, MATH2240
PHYS2810
GEOS2811

Elective courses totalling 3 units of credit

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

MATH3121, MATH3241
MATH3261
MATH3301
MSCI3001

Elective courses totalling 12 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4103 or MATH4104

Pure Mathematics**Stage 1**

MATH1141
MATH1241
MATH1000
MATH1081

Courses totalling 6 units of credit from Science Schools other than Mathematics

Elective courses totalling 18 units of credit

One General Education course totalling 3 units of credit

Stage 2

MATH2060
MATH2111
MATH2130
MATH2601
MATH2620
MATH2901

Further Level II Mathematics courses totalling 6 units of credit.

Elective courses totalling 9 units of credit

One course from: PHYS1000, CHEM1000, LIFE1001, LIFE2001

One General Education course totalling 3 units of credit

Stage 3

Level III Pure Mathematics courses totalling 24 units of credit

Further Mathematics courses totalling 12 units of credit

Elective courses totalling 6 units of credit

General Education courses totalling 6 units of credit

Stage 4 (Honours)

MATH4603 or MATH4604

Advanced Mathematics

This study plan is only available by invitation from the Head of School of Mathematics. Normally students would not be invited unless they have a UAI of at least 98 and a mark of at least 97 in HSC Maths Extension 2 or have Mathematical Olympiad experience. Students in later years may also be invited to join this plan if their WAM exceeds 85 and their Maths WAM exceeds 90. Enrolment in the plan is also subject to approval by the Associate Dean (Academic) of the Faculty of Science. Students are able to approach the Head of School of Mathematics if they are interested in being invited to join the plan.

Students will need to maintain a very high level of achievement (normally a WAM in excess of 80 and Maths WAM in excess of 85) to stay in this plan.

If a student is not able to continue in the plan for any reason, then they will be transferred to another suitable plan in Advanced Science or major in Science with a variation of program to that plan or major if necessary so that they are not disadvantaged by having taken the Advanced Mathematics Plan.

The selection of Advanced Mathematics options and electives in the student's program of study will be made by the student in consultation with their academic mentor. The choice of electives can be made to suit a student's interests and may include a mix of Mathematics Courses and courses from other Schools. The final details require approval of the Head of School of Mathematics and the Associate Dean (Academic) of the Faculty of Science. The outline below is the normal program of study, but may be varied to suit the particular student.

Stage 1

MATH1141 or MATH1151
MATH1241 or MATH1251
MATH1000
3 UOC of General Education
Electives totalling 30 UOC

Stage 2

Advanced Mathematics courses totalling at least 15 UOC
MATH2060
One of PHYS1000, CHEM1000, GEOS1000, LIFE 1001, LIFE2001
3 UOC of General Education
Electives totalling 24 UOC

Stage 3

Advanced Mathematics courses totalling at least 24 UOC
Electives totalling 18 UOC
6 UOC of General Education

Stage 4

Mathematics Honours Year

Medical Physics

Please note: This plan is not available to commencing students in 2006

Honours may be awarded. The basis is a suitably weighted performance over the last three stages of this four-year Advanced Science program.

Medical Physics

Stage 2

BIOC2101
MATH2011, MATH2120
One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
PHYS2010, PHYS2020, PHYS2030, PHYS2040, PHYS2050, PHYS2060, PHYS2410, PHYS2630
General Education courses totalling 6 units of credit

Stage 3

PHPH2101
PHYS1601, PHYS3110, PHYS3120, PHYS3410
One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001, LIFE2001
General Education courses totalling 6 units of credit
Plus electives chosen to make a total of 48 units of credit. Those in the supplementary table below are especially recommended.

Stage 4

PHYS3020, PHYS3030 or PHYS3230, PHYS4411, PHYS4413
SESC4140
Plus electives to make a total of 48 units of credit. Those in the supplementary table below are especially recommended.

Supplementary Table

ANAT2511 or ANAT2111,
PHYS2601, PHYS3010, PHYS3050, PHYS3060, PHYS3210,
PHYS3310, PHYS3610, PHYS3630, PHYS3710, PHYS3720,
PHYS3770, PHYS3780

Microbiology and Immunology

Microbiology is the scientific study of the smallest forms of life namely, bacteria, viruses, archaea, fungi and protozoa. These fascinating organisms impact on our lives in many ways. On the negative side, they cause disease in humans, animals and plants and spoil our food. However, microorganisms are also of great benefit. Indeed, microorganisms are the

key participants for the turnover of nutrients and elements and are the main producers of carbon and biomass. They turn the biological wheels on this globe and are responsible for sustainability of life. They also contribute to a better environment via recycling of organic wastes, maintenance of soil fertility and biodegradation of pollutants. Many foodstuffs, beverages, pharmaceuticals and other products of biotechnology are products of microbial action. The genetic engineering of microorganisms is a fundamental aspect of molecular biology and the way of the future.

Immunology, the study of the immune system, has contributed significantly to modern medicine in areas such as blood transfusion, organ transplantation, treatments of allergic reactions and development of vaccines, and immunity to disease. In cell biology, Immunology has advanced our understanding of differentiation, cell cooperation and the triggering of proliferation and differentiation by cell surface receptors.

Both Microbiology and Immunology also provide an excellent training in the scientific method and scientific communication. We aim to provide an undergraduate training that serves as a starting point for many careers within our disciplines and beyond. An energetic Honours program provides experience of scientific research and aims to further develop a wide range of skills.

Microbiology*

Stage 1

BIOS1101, BIOS1201
CHEM1011, CHEM1021
MATH1041
Elective courses totalling 12 units of credit
LIFE1001
One General Education course totalling 3 units of credit

Stage 2

MICR2201, MICR2011
LIFE2001
Choose 6 units of credit from:
BIOC2201, BIOS2021 or BIOS2621,
Elective courses totalling 24 units of credit
One General Education course totalling 3 units of credit

Stage 3

MICR3611, MICR3021 or MICR3621, MICR3071
Choose 6 units of credit from:
MICR3031, MICR3061, MICR3081, BIOT3081, BIOS3071,
BIOT3011, CHEM3901, GEOH3911, FOOD2490
Elective courses totalling 18 units of credit
General Education courses totalling 6 units of credit

Stage 4 (Honours)

MICR4013 or MICR4023

*At least two of the Stage 2 and two of the Stage 3 courses contributing to the Microbiology Study Plan must be taken at the advanced level.

Medical Microbiology and Immunology*

Stage 1

BIOS1101, BIOS1201
CHEM1011, CHEM1021
MATH1041
Elective courses totalling 12 units of credit
LIFE1001
One General Education course totalling 3 units of credit

Stage 2

MICR2201, MICR2011
LIFE2001
Choose 6 units of credit from:
ANAT2111, ANAT2200, BIOC2101, BIOC2201, BIOS2021 or
BIOS2621, PHPH2101, PHPH2201, PATH2201
Elective courses totalling 24 units of credit
One General Education course totalling 3 units of credit

Stage 3

Choose at least 18 units of credit from:
MICR3041 or MICR3641, MICR3051, MICR3061, MICR3081
Choose 0–6 units of credit from:
MICR3021 or MICR3621, MICR3031, PHPH3121, BIOC3261,
BIOC3271, PATH3204, PATH3205
General Education courses totalling 6 units of credit
Further elective courses to give a total of 48 units of credit

Stage 4 (Honours)

MICR4013 or MICR4023

*At least two of the Stage 2 and two of the Stage 3 courses contributing to the Medical Microbiology and Immunology Study Plan must be taken at the advanced level.

Molecular Biology

Recent advances in molecular biology, especially the continuing development of recombinant DNA technology, have revolutionised our understanding of the structure, function and regulation of individual genes. These advances have opened up the exciting field of molecular biology, one of the most rapid growth areas in biology. This marriage of Biochemistry, Microbiology, Cell Biology and Genetics provides an exciting new approach for the study of all living organisms, including the human. Molecular Biology therefore represents fundamental components of biological and medical science and they will have increasingly important roles to play in many aspects of modern medicine, genetics, evolutionary biology, bioinformatics, biotechnology and genomics.

Molecular Biology*

Stage 1

BIOS1101, BIOS1201
CHEM1011 or CHEM1031
CHEM1021 or CHEM1041
Choose 6 units of credit from:
MATH1031**, MATH1041**
Elective courses totalling 12 units of credit
(Recommended: Physics)
LIFE1001
One General Education course totalling 3 units of credit

Stage 2

BIOC2101*, BIOC2201*
BIOS2021 or BIOS2621*
MICR2201, MICR2011
LIFE2001
Elective courses totalling 12 units of credit
One General Education course totalling 3 units of credit

Stage 3

BIOC3121 or BIOC3621*, BIOC3281, MICR3021 or MICR3621*
Choose 6 units of credit from:
BIOC3111, BIOC3271, BIOC3301, BIOT3061, MICR3011
Elective courses totalling 18 units of credit
General Education courses totalling 6 units of credit

Stage 4 (Honours)

BIOC4428 or MICR4013 or BIOT4073

**At least two of the Stage 2 and two of the Stage 3 courses contributing to the Molecular Biology study plan must be taken at the advanced level.*

***Other higher level I Mathematics courses may be substituted.*

Neuroscience

This Study Plan introduces students to the biological and behavioural aspects of the nervous system. The program is based around the neuroscience courses offered by the Departments of Anatomy, Physiology and Pharmacology, and School of Psychology.

Neuroscience

Stage 1

BIOS1101, BIOS1201
CHEM1011, CHEM1021
PSYC1001, PSYC1011
Choose 6 units of credit from the Level I Mathematics options
LIFE1001
One General Education course totalling 3 units of credit

Stage 2

ANAT2111 or ANAT2511*
BIOC2101 and BIOC2201, or
BIOC2181 and BIOC2291
PHPH2101, PHPH2201
PSYC2071, PSYC2081
LIFE2001
One General Education course totalling 3 units of credit

**A Credit grade is required in ANAT2511 to enrol in Level 3 Anatomy courses.*

Stage 3

ANAT3411, ANAT3421
PHPH3121, PHPH3131
Level III Psychology courses totalling 12 units of credit with one course selected from Advanced Perceptual/Cognitive (PSYC3151, PSYC3211, PSYC3221, PSYC3311, PSYC3321) and one course from Advanced Biological (PSYC3051, PSYC3241, PSYC3251).

An additional course totalling 6 units of credit at Level II or III to complete 48 units of credit. This course might be chosen from those offered by the School in which Honours study is contemplated. In the case of Psychology, this course must be PSYC3001.
General Education courses totalling 6 units of credit.

Stage 4

Subject to satisfactory progress throughout the course (normally a Credit average), students may proceed to the Honours Stage. Before the commencement of Stage 2 students should consult with the appropriate schools and the Neuroscience program coordinating committee consisting of representatives from the Departments of Anatomy, Physiology and Pharmacology and School of Psychology, about the courses required for a particular Honours program. Students should also note general guidelines for Advanced Science Stage 4.

Physics

The Majors offered by the School of Physics reflect the importance of Physics in science and technology at both the fundamental and at the applied levels.

Physics

Stage 1

MATH1131 or MATH1141*
MATH1231 or MATH1241*
PHYS1131
PHYS1231 or PHYS1241
Elective courses totalling 18 units of credit**
One course from: PHYS1000, CHEM1000, MATH1000, LIFE1001
One General Education course totalling 3 units of credit

Stage 2

MATH2011, MATH2120, MATH2520*
PHYS2010, PHYS2020, PHYS2030, PHYS2040, PHYS2050,
PHYS2060, PHYS2630
One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001,
LIFE2001
Elective courses totalling 9 units of credit****
One General Education course totalling 3 units of credit

Stage 3

PHYS3010 or PHYS3210, PHYS3020, PHYS3030 or PHYS3230,
PHYS3050***, PHYS3060***, PHYS3080
Two of PHYS3040, PHYS3070, PHYS3110, PHYS3120
Level III elective courses totalling 18 units of credit****
General Education courses totalling 6 units of credit

Stage 4 (Honours)

Choose one of PHYS4103, BSSM4013

**Students are encouraged to select Higher Level Mathematics courses where applicable.*

***Appropriate Level I electives include COMP1001, PHYS1601, CHEM1011 and CHEM1021.*

****Students interested in Biophysics may replace PHYS3050 (or PHYS3060) with PHYS3410 provided CHEM1011, CHEM1021, BIOS1101 and BIOS1201 are completed in Stage 1 and BIOC2101 and BIOC2201 are taken in Stage 2.*

*****Excluded PHYS2170 and PHYS2520. For students specialising in Theoretical Physics, additional mathematics courses are specified. In Stage 2 students should include MATH2501 (or MATH2601) and in Stage 3 MATH3121 and Theoretical Physics courses.*

Physics and Astronomy

This Study Plan provides the basic physics essential for a career in astronomy. It will not prevent specialisation in some other field of physics if students' interests change during their studies. There is astronomy content in each stage of the plan. There are special lectures and projects in PHYS1241. The other astronomy courses are PHYS2160 and PHYS3160 or PHYS3170, and lecture course and projects in the Honours stage.

Stage 1

MATH1131 or MATH1141*
MATH1231 or MATH1241*
PHYS1131
PHYS1231 or PHYS1241
Elective courses totalling 18 units of credit**
One course from: PHYS1000, CHEM1000, MATH1000, LIFE1001
One General Education course totalling 3 units of credit

Stage 2

MATH2011, MATH2120, MATH2520*
 PHYS2010, PHYS2020, PHYS2030, PHYS2040, PHYS2050,
 PHYS2060, PHYS2160, PHYS2630
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001,
 LIFE2001
 Elective courses totalling 6 units of credit****
 One General Education course totalling 3 units of credit

Stage 3

PHYS3010 *or* PHYS3210, PHYS3020, PHYS3030 *or* PHYS3230
 PHYS3050, PHYS3060, PHYS3080, PHYS3160 *or* PHYS3170
 Two of PHYS3040, PHYS3070, PHYS3110, PHYS3120
 Level III elective courses totalling 15 units of credit****
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

PHYS4103

*Students are encouraged to select Higher Level Mathematics courses where applicable.

**Appropriate Level I electives include COMP1001, PHYS1601, CHEM1011 and CHEM1021.

****Excluded PHYS2170 and PHYS2520.

Physics and Computing

This Study Plan provides a strong background in physics together with the computing skills necessary to fully utilise computers in research and industrial laboratories.

Stage 1

COMP1011, COMP1021
 MATH1131 *or* MATH1141
 MATH1231 *or* MATH1241
 PHYS1131, PHYS1231 *or* PHYS1241, PHYS1601,
 One course from: PHYS1000, CHEM1000, MATH1000, LIFE1001
 One General Education course totalling 3 units of credit

Stage 2

COMP2011, COMP2121
 MATH2011, MATH2120, MATH2520
 PHYS2020, PHYS2030, PHYS2040, PHYS2050, PHYS2060,
 PHYS2630
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001,
 LIFE2001
 One General Education course totalling 3 units of credit

Stage 3

PHYS2010, PHYS3010 *or* PHYS3210, PHYS3020, PHYS3030 *or*
 PHYS3230, PHYS3080
 Further Level III Physics courses totalling 15 units of credit
 Further Level III Computer Science courses *or* PHYS2601 totalling 12
 units of credit
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

PHYS4103

Engineering Physics

This Study Plan is not available to commencing students.

This Study Plan combines a thorough knowledge of experimental physics, electronics, computing and instrumentation, optoelectronics and communications with elements of engineering practice and management. It is designed to produce graduates with skills and knowledge appropriate to the requirements of Australian industry. An industrial project of one session's duration with an industrial sponsor is included in Stage 4.

The program prepares graduates for membership of the Institution of Engineers, Australia, within two years of initial employment in an engineering field. Graduates will be accepted for membership of the Australian Institute of Physics.

Honours may be awarded. The basis is a suitably weighted performance over the last three Stages.

Stage 2

ELEC2031
 MATH2011, MATH2520, MATH2120
 PHYS2010, PHYS2020, PHYS2030, PHYS2040, PHYS2050,

PHYS2060, PHYS2601, PHYS3770 *or* PHYS3780
 One course from: CHEM1000, PHYS1000, MATH1000, LIFE1001,
 LIFE2001
 One General Education course totalling 3 units of credit

Stage 3

ELEC3004, ELEC3016
 MATH2839 *or* MATH2859
 PHYS3020, PHYS3060, PHYS3080, PHYS3310, PHYS3610,
 PHYS3630, PHYS3710
 COMP3221 *or* COMP3311 *or* COMP9316
 General Education courses totalling 6 units of credit

Stage 4

COMP3331 *or* COMP4011
 ELEC4010
 PHYS3010 *or* PHYS3210, PHYS3030 *or* PHYS3230, PHYS3040,
 PHYS3110, PHYS3720, PHYS4764

Physiology and Pharmacology

Physiology, the study of the processes and mechanisms which serve and control the various functions of the body, begins at Level II.

Students majoring in Physiology should note the prerequisites for Level III Physiology. There are four Level III Physiology courses, each six units of credit:

PHPH3121 Membrane and Cellular Physiology
 PHPH3131 Neurophysiology
 PHPH3211 Cardiorespiratory and Exercise Physiology
 PHPH3221 Endocrine, Reproductive and Developmental Physiology

For a major in Physiology, students must complete at least three of these courses (18 units of credit) together with at least 6 units of credit from allied disciplines specified in the study plan below.

Students majoring in Pharmacology should note that there are prerequisites for Level III Pharmacology. There are two Level III Pharmacology courses, each six units of credit:

PHPH3151 Pharmacology and Toxicology
 PHPH3251 Clinical and Experimental Pharmacology

For a major in Pharmacology, students must complete both of these courses (12 units of credit) together with at least 12 units of credit from allied disciplines specified in the study plan below.

Note should also be taken of the prerequisites and corequisites for the courses taken with Physiology and Pharmacology courses.

Physiology**Stage 1**

6 units of credit of Level 1 Biology (BIOS1201 preferred)
 6 units of credit of Level 1 Chemistry
 6 units of credit of Level 1 Maths (MATH1041 excluded)
 Elective courses totalling 24 units of credit
 LIFE1001
 One General Education course totalling 3 units of credit

Stage 2

PHPH2101, PHPH2201
 LIFE2001
 Elective courses totalling 30 units of credit
 BIOC2101 and BIOC2201, *or*
 BIOC2181 and BIOC2291 are highly recommended
 One General Education course totalling 3 units of credit

Stage 3

Choose 18 or 24 units of credit from:
 PHPH3121, PHPH3131, PHPH3211, PHPH3221
 If you choose only 18 UOC from the above, choose a further 6 UOC from the following:
 PHPH3101, PHPH3251, BIOC3261, BIOC3271, BIOC3111,
 BIOC3121, MICR3041, MICR3051, PATH3205, PATH3206,
 PATH3207, or any Level III Anatomy course,
 Elective courses totalling 18 units of credit
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

PHPH4218

Subject to satisfactory progress throughout the program (normally a Credit average), students may proceed to the Honours stage. Students should consult with the Department of Physiology and Pharmacology, and note general guidelines for Advanced Science Stage 4.

Pharmacology

Stage 1

6 UOC of Level 1 Biology (BIOS1201 preferred)
 12 UOC of Level 1 Chemistry
 6 UOC of Level 1 Mathematics (excluding MATH1041)
 Elective courses totalling 18 UOC
 LIFE1001
 One General Education course totalling 3 UOC

Stage 2

PHPH2011, PHPH2101, PHPH2201
 12 UOC from BIOC2101 or BIOC2181, BIOC2201 or BIOC2291,
 CHEM2021, CHEM2041
 LIFE2001
 Elective courses totalling 12 UOC
 One General Education course totalling 3 UOC

Stage 3

PHPH3251, PHPH3101
 12 UOC from PHPH3121, PHPH3131, PHPH3211, PHPH3221,
 BIOC3261, BIOC3111, BIOC3121, CHEM 3021, CHEM3901
 Elective courses totalling 18 UOC
 General Education courses totalling 6 UOC

Stage 4 (Honours)

PHPH4258

Subject to satisfactory progress throughout the program (normally a Credit average), students may proceed to the Honours stage. Students should consult with the Department of Physiology and Pharmacology, and note general guidelines for Advanced Science Stage 4.

Psychology

Psychology is the scientific study of human behaviour. It is a diverse discipline that includes study of the processes of perceiving, learning and memory; the assessment of abilities and attitudes; the origins of personality and emotional states; the nature and effects of social interactions with other people; brain-behaviour relationships; and the causes of abnormal behaviour. Study in the scientific discipline of psychology provides the background necessary for further training in the application of psychology in a variety of professional contexts.

Psychologists work in clinical, correctional, counselling, legal, educational and organisational settings. People with training in psychology also pursue careers in diverse areas including academic and health research; rehabilitation; occupational health and safety; advertising and marketing; and personnel selection, training and management.

Registration as a Psychologist

In order to become a member of the professional body, the Australian Psychological Society (APS), and for registration as a psychologist in

NSW, students first need a university Bachelor degree which includes four years of approved training in psychology. Psychology in the Advanced Science program provides four years of approved training in Psychology. Students must also follow this by completing an accredited 5th and 6th year academic degree such as one of the Master of Psychology degrees (Clinical, Forensic or Organisational) or a combined Doctor of Philosophy/Master of Psychology degree as offered by this University. An alternative of two years of supervised experience in professional practice may be undertaken for registration as a psychologist in NSW.

English Proficiency

A high proficiency in English is needed to pass Psychology courses.

Psychology

Stage 1

LIFE1001
 PSYC1001 and PSYC1011
 Level I courses from Science Schools totalling 12 units of credit
 Elective courses totalling 18 units of credit*
 One General Education course totalling 3 units of credit

Stage 2

LIFE 2001
 PSYC2001, PSYC2061, PSYC2071, PSYC2081 and PSYC2101
 Elective courses totalling 12 units of credit*
 One General Education course totalling 3 units of credit

Stage 3

PSYC3001 and PSYC3011
 Four Level III Psychology electives+
 Elective courses totalling 6 units of credit*
 General Education courses totalling 6 units of credit

Stage 4 (Honours)

PSYC4053 and PSYC4063

+Level III Psychology electives must include one course from at least two of the following three elective groups:

Advanced Perceptual/Cognitive – PSYC3151, PSYC3211, PSYC3221, PSYC3311, PSYC3321

Advanced Biological – PSYC3051, PSYC3241, PSYC3251, PSYC3261

Advanced Social – PSYC3121, PSYC3271, PSYC3281

Note: Not all Level III Psychology elective courses are necessarily offered in each year

*Suitable electives include courses from areas such as: Anatomy, Biological Science, Mathematics, Physiology, History and Philosophy of Science, and Philosophy.

Undergraduate Course Descriptions

ACCT1501

Accounting and Financial Management 1A

School of Accounting
UOC6 HPW3

This is the first course in a sequence of courses dealing with the profession and practice of accounting. It illustrates the analysis and design of a financial accounting system which processes financial data and produces financial reports geared to the information needs of interested parties. It introduces students to the design of accounting systems based on double-entry book-keeping and incorporating other internal controls; also, to the problems of accounting for cash, debtors, inventories and property plant and equipment. It also provides a critical introduction to the ideas underlying accounting practice and to issues associated with the uses and limitations of traditional financial reports.

ACCT1511

Accounting and Financial Management 1B

School of Accounting
UOC6 HPW3

Prerequisite: ACCT1501

This is the second course in a sequence of accounting courses and includes financial accounting topics such as an examination of the regulatory environment of financial reporting; the definition and recognition of assets, liabilities, revenues and expenses; and accounting for corporations. Aspects of managerial and investor decision-making are covered including financial statement and cash flow analysis, and examination of cost/volume/profit relationships in a single product firms, and short term budgeting.

ACCT2522

Management Accounting: Process Improvement and Innovation

School of Accounting
UOC6 HPW3

Prerequisite: ACCT1511; Excluded: ACCT2532.

This course examines management accounting, directed towards the effective use of organisational resources. Organisations create value through the use of resources, and can enhance such value by focusing and reconfiguring their internal processes in various ways; that is, by changing the ways in which they conduct business and perform work. It is argued that, in world class organisations, the management of time, flexibility, quality, integration, variability and interdependencies is critical to sustained value generation. This course explains how management accounting supports such value generation, within changing organisational processes.

ACCT2542

Corporate Financial Reporting and Analysis

School of Accounting
UOC6 HPW3

Prerequisite: ACCT1511; Excluded: ACCT2552.

This intermediate financial accounting course is intended for students who will be involved in the preparation or use of corporate financial reports whether as accountants, financial executives, auditors, financial analysts, actuaries or legal advisors. This course builds on the foundation laid in ACCT1501 and ACCT1511 and covers financial reporting on, and analysis of, more complex business transactions, events and structures. Topics include tax effect accounting and the preparation of consolidated financial statements as well as accounting for specific industries, such as insurance and superannuation.

ACCT3563

Issues in Financial Reporting and Analysis

School of Accounting
UOC6 HPW3

Prerequisite: ACCT2542 or ACCT2552; Excluded: ACCT3573.

This is the final course in financial accounting. Building on the foundation laid in ACCT2542, it covers more advanced topics including accounting and analysis in respect of associates, joint ventures, foreign currency transactions, offshore operations, diversified operations and derivative financial instruments. The course also covers topical issues related to the scope and quality of financial reports. Examples of such topics from past years include environmental reporting, ethical reporting dilemmas, and the information that should be reported on cultural and heritage assets.

ACCT3573

Issues in Financial Reporting and Analysis (Honours)

School of Accounting
UOC6 HPW3.5

Prerequisite: ACCT2552 or ACCT2542; Excluded: ACCT3563.

The content of this course includes that of ACCT3563 Issues in Financial Reporting and Analysis as well as additional and more advanced work in financial reporting and accounting theory.

ACCT3583

Stakeholder Value Management

School of Accounting
UOC6 HPW3

Prerequisite: ACCT2522 or ACCT2532; Excluded: ACCT3593.

Subject to availability - consult school timetable.

This course is concerned with the ways in which tangible and intangible resources are combined and leveraged in order to deliver stakeholder value in contemporary organisational contexts. The ways in which these resources are managed affects the ability of organisations to deliver value to various stakeholders, such as shareholders, customers, employees, suppliers, the community and the natural environment, both in the short and long-terms. A strategic challenge for organisations is to achieve a balance between these different forms of stakeholder value in the present and the future. This course examines the ways in which a set of practices that bears the label of 'management accounting' constrains and enables processes of stakeholder value management. The course will draw upon a variety of readings and cases to explore these issues.

ACCT3585

E-Business: Strategy & Processes

School of Accounting
UOC6 HPW3

Prerequisite: ACCT2522 or ACCT2532

Organisations engaging in electronic forms of business are seeking to create and sustain value by radically altering conventional business models whilst focusing and reconfiguring their internal processes. Emergent electronic business models such as information, brokerage, electronic auction, virtual community, third party market place (or portal) and value chain integrator, are challenging the conventional ways by which business is conducted and work is performed. It is argued that, for such organisations, the strategic management of time, cost, flexibility, quality and integration is critical to sustain value generation. This course will build on existing second and third year courses in accounting. It has the following aims. First, it seeks to highlight and evaluate the new business strategies and models adopted by e-Businesses. Second, it seeks to explore how these models have differential effects on business processes. Third, it examines the implications of reorienting existing organisational structures, processes and culture to e-Business strategy. Fourth, it discusses the relevance of new performance metrics (shareholder value analysis, economic value added, etc) in the management of intangible assets. The course draws upon research, professional literatures and case studies to explore the issue of creating value through electronic forms of business.

ACCT3593

Stakeholder Value Management (Honours)

School of Accounting
UOC6 HPW3.5

Prerequisite: ACCT2522 or ACCT2532; Excluded: ACCT3583.

The content of this course includes that of ACCT3583 Stakeholder Value Management, as well as more advanced work dealing with theoretical and research issues in management accounting.

ACCT3601

Global Financial Reporting and Analysis

School of Accounting
UOC6 HPW3

Prerequisite: ACCT2542 or ACCT2552

With the increasing globalisation of business and capital markets, there is a more extensive use of cross-border financial information. This course considers the key issues in international financial reporting and analysis. Topics include: the types of differences in national financial reporting practices; the reasons for the differences; the progress of the International Accounting Standards Board in reducing the diversity; foreign exchange risk and foreign currency accounting issues; reporting and disclosure in developed countries including the USA, Japan and the members of the European Union; the role of accounting in developing countries and Eastern Europe; financial reporting in emerging capital markets including

those in the Asia-Pacific region; and analysis of country-specific financial statements in the cultural, business and legal context of each country. Numerical examples and cases are used to highlight important concepts and issues.

ACCT3610

Financial Statement Analysis

School of Accounting

UOC6 HPW3

Prerequisite: ACCT2542 or ACCT2552, FINS1613

This course is about the analysis of financial information arising primarily from the financial reports of entities. Fundamental analysis techniques are examined in detail with particular emphasis on the application of these techniques in equity (share) valuation decisions. Some attention is also given to credit assessment and debt valuation decisions. The techniques are applied in cases and projects involving listed companies. Topics considered include fundamental ratio analysis using reported and 'off-balance sheet' information, an analysis of accrual accounting and cash flows, the analysis of profitability, growth and valuation generation in a firm, determining the quality of financial reports, forecasting earnings and cash flows, pro-forma analysis for strategy and planning, analysis of risk, and a comparison of alternative valuation models.

ACCT3708

Auditing and Assurance Services

School of Accounting

UOC6 HPW3

Prerequisite: ACCT2542 or ACCT2552 or approval from the School; Excluded: ACCT3718.

This course examines the practice of auditing and the underlying concepts, auditors' responsibilities and the audit environment. Although the focus of attention is on audits carried out under the provisions of the Corporations Law, reference is also made to other forms of audit. The course is intended to provide an overview of the audit process as it exists in Australia. Both CIS and computer-assisted audit techniques are an integral part of this course.

ACCT3718

Auditing and Assurance Services (Honours)

School of Accounting

UOC6 HPW3.5

Prerequisite: ACCT2542 or ACCT2552 or approval from the School; Excluded: ACCT3708.

The content of this course includes that of ACCT3708 Auditing and Assurance Services, as well as introducing students to major research areas in current auditing research, critically examining research methods used and considering possible future developments in audit theory and research. Topics covered may include demand and supply of the audit function, audit fee research, behavioural audit research and audit expertise studies.

ACCT4794

Thesis (Accounting)

School of Accounting

UOC24

Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

ACCT4809

Current Developments in Auditing Research

School of Accounting

UOC6 HPW3

Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

An examination of current areas of research in auditing and substantive studies in each area. The following topics will be considered: theory about auditing; overview of audit research; nature of audit work; agency theory and the existence of the audit function; human information processing in auditing; audit teams and the review process; experience and expertise; independence; audit fees and other service fees; effect of the audit report; and future development in audit theory and research.

ACCT4851

Current Developments in Accounting Research - Financial

School of Accounting

UOC6 HPW3

Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

Review of alternative approaches to the development of theories in external reporting. Explication and evaluation of substantive theories and associated research studies. Examination of research findings related to the accounting and reporting environment, agency cost and financial contracting, the properties of reported accounting numbers, predictive value of accounting information, the use of information in capital markets, and the use of accounting reports by individual decision makers.

ACCT4852

Current Developments in Accounting Research - Managerial

School of Accounting

UOC6 HPW3

Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

The aim of this course is to equip students with a comprehensive understanding of contemporary management accounting research, which emanates from different philosophical perspectives and employs different theories and research methods. Research is divided into two broad streams: work that seeks (a) to explain and design, and (b) to understand and interpret the practice of management accounting in organisational societies. Topics covered include design approaches using behavioural decision theory, contingency theory, institutional theory, and others and interpretive approaches using symbolic interactionism and theories of culture. There is also brief coverage of national differences in management accounting practice and of critical analyses of the development and operation of management accounting systems.

ACCT4897

Seminar in Research Methodology

School of Accounting

UOC6 HPW3

Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

To assist BCom Hons students in completion of research project requirement. May consist of an examinable readings program defined to meet the needs of a particular student or a formal program undertaken by a group of students whose research projects are in a common area.

ACCT8691

Industrial Training 1

School of Accounting

UOC12

ACCT8692

Industrial Training 2

School of Accounting

UOC18

ACCT8693

Industrial Training 3

School of Accounting

UOC18

ACCT8694

Business Internship (Type A)

School of Accounting

UOC6

Excluded: ACCT8695

Type A Interns enrol for 18 week session including the examination period. Placement attendance is an average 2 days per week. In addition to academic requirements students are required to complete a norm of 180-200 hours on work placement. The internship is considered to be equal to one course.

Note: Available only to Study Abroad students.

ACCT8695

Business Internship (Type C)

School of Accounting

UOC12

Excluded: ACCT8964

Type C Interns Enrolment is for 18 week session including the examination period. Placement attendance is an average 3 days per week. In addition to academic requirements students are required to complete a norm of 220-240 hours on work placement.

Note: Available only to Study Abroad students.

ACCT9003**Introduction to Accounting Principles**

School of Accounting

UOC3 HPW2

Excluded: ACCT1501, ACCT9001, ACCT9002, ACCT9062

This course will provide students with a basic understanding of the key financial statements and how transactions they are likely to be involved with will affect those financial statements. Students will learn about some of the internal controls and why they exist in organisations. They will learn to analyse financial statements and make decisions using those statements. The basics of management accounting will be introduced including cost behaviour, cost-volume-profit analysis, costing and budgeting.

ACTL1001**Actuarial Studies and Commerce**

Actuarial Studies Unit

UOC6 HPW3

This course is designed to provide an introduction to actuarial studies. It covers the basic principles underlying the actuarial analysis and management of insurance, superannuation and other financial contracts. It also aims to demonstrate the importance of statistics, mathematics, demography, economics, accounting, finance, business law and computing to actuarial studies.

ACTL2001**Financial Mathematics**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ECON1202 or MATH1131 or MATH1141 or MATH1151

This course develops the financial mathematics required for the analysis of financial and insurance transactions. Topics covered include: mathematics of compound interest; discounted cash flow techniques; valuation of cash flows of simple insurance contracts; analysis and valuation of annuities, bonds, loans and other securities; yield curves and immunisation; introduction to stochastic interest rate models and actuarial applications.

ACTL2002**Probability and Statistics for Actuaries**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ECON1203 or MATH1231 or MATH1241 or MATH1251

This course covers probability and statistics topics relevant to actuarial studies. Topics covered include probability generating functions, moment generating functions, marginal and conditional distributions, independence and convolution, conditional expectation and compound distributions, sampling distributions, estimation methods, hypothesis tests, regression, analysis of variance. Examples relevant to actuarial studies are used to illustrate the application of the topics covered.

ACTL2003**Stochastic Models for Actuarial Applications**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ACTL2002 or MATH2801, MATH2831 or MATH2901, MATH2931

This course provides an introduction to the stochastic models used by actuaries to model both liabilities and assets and illustrates their applications in actuarial work. Topics covered include the terminology of stochastic processes; main features of a Markov chain and application to experience rating; Markov process models and application to survival, sickness and marriage models; simple time series models including random walk and auto-regressive models and their application to investment variables; properties of Brownian motion and applications to investment variables; methods for simulation of a stochastic process. Students will be required to implement models using spreadsheets and programs in a numerical computer package.

ACTL2100**Industrial Training 1 (Co-op)**

Actuarial Studies Unit

UOC6

Prerequisite: ACTL1001

Students consider the practical application of the fundamental principles of actuarial studies in an industry environment.

ACTL3001**Actuarial Statistics**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ACTL1001, ACTL2003

This course covers survival models, their estimation and application to mortality and other decrements. Specific topics include: the concept of a survival model and actuarial notation; estimation of lifetime distributions; multiple state models; maximum likelihood estimation of transition intensities; construction of multiple decrement tables; the binomial model of mortality and its estimation; models with transition intensities depending on age and duration; the census approximation and formulae; statistical comparison of crude rates with standard table; graduation of crude estimates and tests of fidelity and smoothness; analysis of mortality/morbidity and the main forms of selection; models for projection of populations. The analysis of data using a numerical computer package will form a part of the course assessment.

ACTL3002**Life Insurance and Superannuation Models**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ACTL1001, ACTL2003

This course covers the actuarial mathematics and models for use in the analysis and actuarial management of life insurance and superannuation contracts. Topics covered include: the main forms of life insurance and annuity contracts, disability and long term care contracts and superannuation fund benefits; actuarial notation and the life table; moments of the value of the benefit payments; Thiele's differential equation for policy values; stochastic modelling of claims and benefit payments; gross premiums, net premiums, policy values and reserves; allowing for expenses and inflation; use of discounted emerging costs and profit tests; asset shares in life insurance; termination and alteration values; cost of guarantees; joint life functions; valuation of disability insurance contracts.

ACTL3003**Insurance Risk Models**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ACTL1001, ACTL2003

This course covers the actuarial mathematics, statistics and models used in non-life insurance actuarial practice. Topics covered include: basic concepts of decision theory and Bayesian statistics; loss distributions and reinsurance, risk models including compound Poisson; estimation of aggregate claims distribution; probability of ruin; premium rating and credibility; experience rating systems; claims reserving for loss run-off data and generalised linear models.

ACTL3004**Financial Economics for Insurance and Superannuation**

Actuarial Studies Unit

UOC6 HPW3

Prerequisite: ACTL2001

The aim of this course is to introduce the mathematical and economic models of financial economics and highlight their application to asset-liability management for insurance, superannuation and funds management. Topics covered include; risk and utility; risk measures; mean variance models; factor models; asset liability models using portfolio selection models; equilibrium and arbitrage-free valuation; valuation of derivatives; term structure models; actuarial stochastic investment models and their application. The topics will be illustrated with applications to the valuation and risk management of insurance and superannuation contracts especially those with embedded options and financial guarantees.

ACTL3005**Superannuation and Retirement Benefits**

Actuarial Studies Unit

UOC6 HPW3

Prerequisites: ECON1101, ECON1203

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisons.

ACTL3100**Industrial Training 2 (Co-op)**

Actuarial Studies Unit
UOC15

Prerequisite: ACTL2100

Students study, in depth, the application of actuarial principles in an industry environment.

ACTL4000**Thesis (Actuarial Studies)**

Actuarial Studies Unit
UOC24

Prerequisite: Admission to BCom Hons in Actuarial Studies

Honours students complete a thesis under the direction of a supervisor. The thesis requires the reporting of research in an approved topic area in actuarial studies including a literature review, analysis of a research problem along with presentation of research methods and data analysis.

ACTL4001**Actuarial Theory and Practice A**

Actuarial Studies Unit
UOC6 HPW3

Prerequisite: Admission to BCom Hons in Actuarial Studies

This course develops the theory and practice underlying the actuarial management of risk-based and other products offered by financial institutions. The course draws examples from actuarial practice and discusses implications for life insurance, general insurance, superannuation, asset-liability management and other areas where actuaries are involved in product design, pricing, reserving, investment and surplus management. The course emphasises recent developments in actuarial theory. This course, along with ACTL4002, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

ACTL4002**Actuarial Theory & Practice B**

Actuarial Studies Unit
UOC6 HPW3

Prerequisite: Admission to BCom Hons in Actuarial Studies

This course, along with ACTL4001 Actuarial Theory and Practice A, develops the theory and practice underlying the actuarial management of risk-based and other products offered by financial institutions. The course draws examples from actuarial practice and discusses implications for life insurance, general insurance, superannuation, asset-liability management and other areas where actuaries are involved in product design, pricing, reserving, investment and surplus management. The course emphasises recent developments in actuarial theory. This course, along with ACTL4001, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

ACTL4003**Research Topics in Actuarial Studies**

Actuarial Studies Unit
UOC6 HPW3

Prerequisite: Admission to BCom Hons in Actuarial Studies

This course is an advanced course in actuarial science covering selected topics in the areas of actuarial modelling in insurance risk, life insurance, superannuation and financial economics. The course will involve the study and discussion of current research papers and advanced texts of interest to research students. As part of the course, students will learn to develop a research topic, apply the methodology of scientific research and gain exposure to the presentation of research in actuarial journals.

ACTL4004**Thesis (Actuarial Studies) (Part Time)**

Actuarial Studies Unit
UOC24 HPW3

Prerequisite: Admission to BCom Hons in Actuarial Studies

Honours students complete a thesis under the direction of a supervisor. The thesis requires the reporting of research in an approved topic area in actuarial studies including a literature review, analysis of a research problem along with presentation of research methods and data analysis.

ACTL4100**Industrial Training 3 (Co-op)**

Actuarial Studies Unit
UOC15

Prerequisite: ACTL3100

Students study, in depth, the application of actuarial principles in an industry environment.

AERO3101**Aerospace Design 1A**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Corequisite: AERO3620

Aerospace vehicle types, characteristics, size and performance. The special constraints involved in the design of an aerospace vehicle. Aerospace regulations and materials; quality control. Introduction to computer design techniques. Design of typical thin wall structures; struts; joints and fasteners. ESDU data sheets and resource material. Design work in selected areas and reports.

AERO3102**Aerospace Design 1B**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: AERO3101, Corequisite: AERO3400

Vehicle loads; thrust inertia, atmospheric flight (manoeuvre and gust), wings fuselage, empennage and controls. Material fatigue and degradation; safe life and fail safe design. Weight and balance, centre of gravity; applied forces and moments; static and dynamic equilibrium, vehicle trim. Landing gear. Vehicle systems. Interaction of production engineering and maintenance requirements. Design work in selected areas and reports.

AERO3400**Analysis of Aerospace Structures 1**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH2412

Aerospace applications of plane frames and space structures. Open and closed section thin walled beams, Stresses due to torsion and shear in multicell tubes. Wing and fuselage structures, ribs and bulkheads. Deflections. Structural instability, buckling of perfect and imperfect columns, bending and buckling of thin flat plates. Introduction to composite materials, sandwich panels.

AERO3610**Aerodynamics and Propulsion**

School of Mechanical and Manufacturing Engineering
UOC6 HPW6

Prerequisite: MECH2612, MECH2712

Inviscid conservation relations. Potential flow source, sink, doublet and point vortex; superposition with uniform flow. Airfoil formation and Kutta condition. Two dimensional incompressible flows around thin airfoils. Incompressible flow about wings of finite span. Experimental techniques. Introduction to propulsion systems; history, types, basic thrust, efficiency equations, propellers, rotors and fans.

AERO3620**Flight Dynamics and Systems**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH2320 or MECH2300

Introduction to atmospheric and space environment. Aircraft performance in terms of drag, thrust and power. Minimum and maximum speeds, range and endurance. Rates of climb and energy height methods. Manoeuvring and flight loads including manoeuvre and gust envelopes. Mission profiles including take-off and landing. Introductory longitudinal static stability; manoeuvre points and margins. Flight testing. Fluid, mechanical and electrical systems in aerospace vehicles; power, mass and information transfer; environment control. Flight control.

AERO4101**Aerospace Design 2A**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: AERO3102

Project teams are formed to carry out the initial design of an aerospace vehicle within a simulated industrial environment. Work involves current design and analysis tools and use of experimental data. A lecture program supports this work. A satisfactory grade in this course is provisional pending successful completion of AERO4102.

AERO4102

Aerospace Design 2B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: AERO4101

Building on work in AERO4102, project teams complete their initial design study, produce a group report and an individual portfolio, and present their findings.

AERO4401

Analysis of Aerospace Structures 2A

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: AERO3400, MECH3400 Excluded: AERO9415, MECH9410, NAVL4401

Finite element analysis of aerospace structures, including modelling, resource requirements and accuracy. Applications from linear and non-linear elasticity using commercial finite element programs.

AERO4402

Analysis of Aerospace Structures 2B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: AERO4401 Excluded: MECH4410, MECH9410

Introduction to the dynamic response of aerospace structures. Aeroelasticity including control reversal, divergence and flutter. Analysis of bonded and bolted joints. Fracture mechanics and fatigue including residual strength of cracked components, crack growth, arrest and damage tolerance. Thermal stresses.

AERO4610

Advanced Aerodynamics and Propulsion

School of Mechanical and Manufacturing Engineering

UOC6 HPW6

Prerequisite: AERO3610

One-dimensional gas flow. Thermodynamic and sonic speed relations; Mach number, isentropic variable area flow, Prandtl Meyer flow, normal and oblique shock waves. Method of characteristics. Compressible potential flow. Viscous flow; method of calculating viscous drag. Engine intakes; subsonic, supersonic, ramjets, gas turbines, piston engines, design performance. Rockets. Noise. Pollution.

AERO4620

Aerospace Vehicle Dynamics and Avionics

School of Mechanical and Manufacturing Engineering

UOC6 HPW6

Prerequisite: AERO3620

Space dynamics; exo-atmospheric vehicles, three body problem, orbit selection and prediction, tracking, maneuvering and rendezvous. Dynamics of space launchers; single stage and multi stage rockets, optimization and control. Dynamic stability and control of atmospheric and exo-atmospheric vehicles; dynamic response to the mission. Avionics and advanced aircraft systems; flight control, computer-aided vehicle management.

ANAT1510

Introductory Histology for Health and Exercise Science

School of Medical Sciences

UOC3 HPW3

Prerequisite: BIOS1201

This course will provide an introduction to the histology of basic tissue, bones, joints, muscle tissue, nervous tissue, circulatory, respiratory and urinary systems. Other topics covered include early development, growth and aging, and human evolution.

ANAT2111

Introductory Anatomy

School of Medical Sciences

UOC6 HPW6

Prerequisites: BIOS1201, BIOS1101 or PHPH1501 or HESC1501.

Excluded ANAT2511, ANAT2151

Note: From S1 2007 ANAT2111 will also require 6UOC of Level 1 Chemistry.

Introduction to gross anatomy of the whole body, based on a study of prosected specimens. General topographical and systematic anatomy, musculoskeletal, cardiovascular, respiratory, gastrointestinal, genitourinary and nervous systems. This course is designed for students who wish to proceed to Level III studies, or a major, in Anatomy.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

ANAT2151

Introductory Functional Anatomy

School of Medical Sciences

UOC3 HPW3

Overview of basic human anatomy and physiology with an emphasis on structures and systems which are most vulnerable to chemical and physical trauma under industrial conditions, such as the eye, ear, and skin. Other systems studied include the musculoskeletal system, central and peripheral nervous systems, circulatory, respiratory, gastrointestinal, endocrine, and urogenital systems. Offered as a distance education course.

ANAT2241

Histology: Basic and Systematic

School of Medical Sciences

UOC6 HPW6

Prerequisite: BIOS1101, BIOS1201. Excluded ANAT1510, ANAT2200, ANAT2210, ANAT2511

The first half of this course provides an overview of the structure of mammalian cells and their organization into tissues. Topics include the use of the light microscope, the preparation of tissues and morphological examination of epithelium, glands, connective tissue (e.g., cartilage, bone, and blood), muscular, and nervous tissues. An emphasis will be placed on the recognition of cell types and the correlation of structure and function. The second half of the course deals with a histological examination of the major body systems namely cardiovascular, respiratory, lymphatic, integumentary, digestive, endocrine, urinary, reproductive, and special senses. Emphasis will be placed on integrating structure of a system with function. This whole course provides an excellent basis for the future study of pathological disorders.

ANAT2341

Embryology: Early and Systematic Development

School of Medical Sciences

UOC6 HPW6

Prerequisite ANAT2241, Excluded ANAT2300, ANAT2310

The first half of this course introduces the morphological and molecular mechanisms of segmentation and patterning responsible for organizing the body plan in the embryo. Topics will include the molecular, genetic and cellular approaches to the study of human embryology using four main vertebrate systems: frog, fish, chick and mouse. The second half of this course will cover human fetal development through to birth, including the developmental anatomy of the organ systems. The course will examine the common principles and differences that underlie normal and abnormal development of vertebrates: specifically, the roles of cell differentiation, proliferation and migration, target recognition, interaction in the nervous system, axial polarity, cell adhesion, cell fate and signalling. Emerging technologies such as genomic analysis and the use of transgenic and dysfunctional mouse mutants in research will be covered.

ANAT2511

Fundamentals of Anatomy

School of Medical Sciences

UOC6 HPW6

Excluded: ANAT2111, ANAT2151, ANAT2200, ANAT2241

This course provides an introduction to the fundamental principles of human structure. It includes an introduction to the histology of basic tissues; an overview of the functional anatomy of the major body systems; human development, growth and aging; human evolution; body imaging. This course is designed for students who do not plan to major in Anatomy. Students who achieve a credit level pass or better can use this course as a prerequisite for ANAT3411 Neuroanatomy or ANAT3121 Visceral Anatomy.

ANAT2601

Biological Anthropology A: The Primates

School of Medical Sciences

UOC6 HPW4

Prerequisite BIOS1101, BIOS1201, Excluded ANAT2600

This course introduces the study of primates within comparative, functional and evolutionary frameworks drawing heavily on evidence from anatomy. It details distinguishing anatomical features of the Order Primates. Primate diversity is considered through various approaches: by studying adaptations in anatomy and behaviour between and within major primate groups and their relationship to ecological variables, biological classifications and reconstructed evolutionary relationships, and the record for primate evolution via the complimentary lenses of evolutionary biology, palaeontology and genetics. The place of humans within the order primates is an important topic. Aspects of primate ecology are considered.

ANAT2611**Biological Anthropology B: Human Evolution**

School of Medical Sciences

UOC6 HPW4

Prerequisite: BIOS1101, BIOS1201, Excluded ANAT2600

This course introduces the field of palaeoanthropology. It examines evidence for our early ape ancestors, the emergence of the human lineage, earliest hominins, australopithecine diversity, and genus *Homo* up to the emergence of modern humans (a topic covered in detail in ANAT3601). It draws heavily on evidence from anatomy, especially from the human fossil record, in considering major adaptations of the human lineage and evidence for anatomical change. The multidisciplinary nature of modern palaeoanthropology is examined in recognition of the complex nature of the evidence for our biological origins.

ANAT3121**Visceral Anatomy**

School of Medical Sciences

UOC6 HPW6

Prerequisite: ANAT2111 or a minimum of a credit in ANAT2511.

Extends on the teachings of ANAT2111 and ANAT2511 and compliments the other level III anatomy courses (ANAT3131, ANAT3141 and ANAT3411) by providing detailed information regarding the viscera and associated musculoskeletal structure of the head, neck, thorax, abdomen and pelvis. The course aims at providing students with sound knowledge of the structure and, to a lesser degree, the function of the respiratory, cardiovascular, gastrointestinal, urinary, reproductive, lymphatic and autonomic nervous systems. Lectures focus on the structure and function of the viscera as well as clinical cases and surface anatomy, while the laboratory classes involve the study of wet and plastinated prosected specimens, cross-sectional images and radiographs. Assessment consists of two practical exams, an essay assignment and a theory exam and this course can be used towards obtaining a major in Anatomy and/or Physiology.

ANAT3131**Functional Anatomy 1**

School of Medical Sciences

UOC6 HPW4

Prerequisite: ANAT2111; Excluded: ANAT2151

Functional anatomy of the musculoskeletal system in the head, neck and upper limb, includes biomechanics of connective tissue; in particular bone, cartilage and tendon. Laboratory classes involve study of prosected specimens, X-rays and surface anatomy.

ANAT3141**Functional Anatomy 2**

School of Medical Sciences

UOC6 HPW4

Prerequisite: ANAT3131

Functional anatomy of the musculoskeletal system in the trunk and lower limb. Includes functional aspects of muscle and a discussion of the mechanics and energetics of walking and running. Laboratory classes involve study of prosected specimens, X-rays and surface anatomy.

ANAT3231**Cell Biology**

School of Medical Sciences

UOC6 HPW4

Prerequisite: ANAT2200 or ANAT2241

Cell Biology has broad applications to medical and basic science research. This course studies both cellular structure and cell functions. Also covered are the current and developing cell biology research techniques.

ANAT3411**Neuroanatomy**

School of Medical Sciences

UOC6 HPW6

Prerequisite: ANAT2111 or a minimum of a credit in ANAT2511.

Provides an overview of the anatomical organisation of the central nervous system. Topics covered include: cytoarchitecture of brain and spinal cord; functional anatomy of sensory and motor systems and higher cerebral functions such as language and emotions; blood supply of the central nervous system; cerebrospinal fluid and meninges.

ANAT3421**Neuroscience Research Seminars**

School of Medical Sciences

UOC6 HPW3

Prerequisite: ANAT3411 or PHPH3131

Focuses on selected areas of interest in contemporary neuroscience research. Includes: brain development and axon guidance, pain pathways, spinal cord injury, central control of cardiovascular function, cortical processing of visual information and bionic eyes, drug addiction, control of appetite and the neuropathology of degenerative disorders. The course is organised in seminar format with discussion of original research papers. It is ideal for students considering doing Honours as it provides a background to current research problems and the opportunity to undertake a small project.

ANAT3601**Biological Anthropology C: Modern Humans**

School of Medical Sciences

UOC6 HPW4

Prerequisite: ANAT2601 or ANAT2611. Excluded: ANAT2610

This course covers biological aspects of modern humans from origins to challenges faced by present and future populations. Study commences with a detailed examination of the evolution of modern humans building on evidence introduced in ANAT2611. Global colonisation lead to new stresses and biological challenges for humans: these challenges and human biological responses to them are considered. A major focus is understanding physical (anatomical and biochemical) variation among recent and contemporary humans, the forms it takes and its causes. Other topics include human sexual dimorphism, growth, development, ageing and physique, and their relationship to function, disease and behaviour. The possible future course of human evolution is explored. This course draws heavily on evidence from anatomy.

ANAT4508**Anatomy 4**

School of Medical Sciences

UOC24

An Honours program consisting of the preparation of a research thesis and participation in School seminars.

ARCH1102**Architectural Design Workshop 1**

Architecture Program

UOC8 HPW6

Exploration of the implications of precedents for design practice. Focus on the development of integrated design strategies and approaches responding to human needs, the natural environment and technical aspects of architecture. There will be an emphasis on the development of foundational knowledge and skills of research, critical analysis, conceptualisation, speculation and communication. Development and application of basic design principles. Critical reflections on students own design approaches and strategies. Detailed consideration of architectural elements, components, construction assemblies and environmental systems. Design of small-scale spaces and buildings, with simple programmatic requirements, to a basic level of integration. Predominantly individual work supported by peer-group activities. A series of studio-based design projects and assignments will be defined within tight programmatic limits, and resourced across selected aspects of the History and Theory, Technology and Communication streams to maximise possibilities of integration.

ARCH1121**Architectural History and Theory 1**

Architecture Program

UOC4 HPW3

A general introduction emphasizing major thresholds in Western architectural history, with brief cross-cultural explorations of Asian architectural history. The key issues examined will include: geometric and iconographic order, the status and role of architectural designers and writers, methods of representation and reproduction involved in constructing and propagating architectural ideas, and 20th-century architecture in the context of developments in the visual arts generally. Assignments include exercises in writing short analytical texts and in typographic design.

ARCH1122

Architectural History and Theory 2

Architecture Program
UOC4 HPW3

A series of close examinations of key buildings and writings in 20th-century architecture of Western Europe, North America, Australia and Japan. A substantial proportion of the selected buildings will be small and medium-scale projects. They will be examined in terms of key concepts and issues, including: plan libre and raumplan, designing in section, public and private, architecture and the media, architecture and the city, architecture and landscape, and cross-cultural interaction. Assignments include exercises in writing short analytical texts and in freehand drawing and typographic design.

ARCH1142

Communications 1

Architecture Program
UOC4 HPW3

This is a foundation course in developing capabilities in a broad range of architectural manual graphic communication skills, particularly architectural drawing and model making. Students are introduced to the various architectural drawing conventions, to freehand architectural drawing styles and media and to creative drawing as a means of analyzing and exploring architectural and design ideas. The course also teaches model making as a means of exploring the 3D resolution of spatial concepts and theories, and verbal skills through in-class presentations that teach the ability to intelligently talk about architectural ideas. Assessment is a mixture of exams, assignments and continuous assessment with a particular stress on in-class participation. Marks are based on each student's engagement with the problems, the development of specific skills, their creative engagement with the course content and willingness to push their envelope of knowledge. Project tasks are designed to be relevant to, complement and parallel other subject areas taught in first year, and to integrate the manual skills necessary to develop and communicate architectural ideas and designs intelligently, clearly and creatively.

ARCH1171

Architectural Technologies 1

Architecture Program
UOC9 HPW5

Specialists in environment, structures and construction describe the basic concepts of their fields. An introduction to concepts of social responsibility, environmental accountability and ecological sustainability. Implications for the urban/built and natural environments. Fundamentals of building physics, as they relate to the concepts of comfort and environmental control. Foundation is basically quantitative but assumes only basic numeracy skills. Introduction to basic structural behaviour and its relationship to construction, material and environmental aspects of design. Introduction to different ways of thinking about construction in relation to design practice. Investigation of the artifactual nature and materiality of buildings. Outline of construction principles and their implications for the development of construction strategies in architectural design. Introduction to building material science; sustainable resource management and life cycle energy assessment.

ARCH1172

Architectural Technologies 2

Architecture Program
UOC8 HPW5

Environment: Thermal comfort and building climatology: perception and comfort; the body's responses; bioclimatic classification and traditional buildings. Solar geometry and control of sunlight. The building envelope: thermal performance; principles of heat transfer; solar radiation effects; absorptivity, reflectivity, conduction, thermal gradients; condensation and thermal insulation; degree day concept and prediction of heating requirements. Structures: Analysis of structural precedents in relation to human need and design practice. Outline of key structural behaviour

concepts: loading - including load transfer, forces at supports and connections; resistance to loads - including stability, strength and stiffness; stress - including axial, shear, bending and deformation. Focus on basic linear structural elements and systems - including cable and arch, strut and column, beam, truss, frame. Concept and techniques of modelling, predicting and incorporating structural behaviour in design. Basic structural modelling techniques and problem solving tools - physical, graphical, numerical, computer-assisted. Introduction to basic statics, properties and strength of materials. Introduction to basic building physics. Implications for structural, constructional and environmental issues in design. Construction: Introduction to masonry and timber in design and construction with an emphasis on small to medium scale buildings. The basic physical properties, manufacturing processes, use and performance of masonry and timber. An introduction to construction documentation standards. Lecture material will be supported through associated projects in the Design Workshop program.

ARCH1201

Architectural Design Workshop 2

Architecture Program
UOC8 HPW6

Exploration of theoretical, tectonic and technological factors influencing design thinking and practice. An emphasis on critical and strategic skills of research and architectural speculation, directed to the development of useful implications for design practice. Detailed design of small to medium-scale spaces and architectural elements, components and construction assemblies, to a moderate level of integration. Individual and collaborative group-based work. A series of studio-based design projects and assignments will be defined within tight programmatic limits, and resourced across selected aspects of the History and Theory, Technology and Communications streams to maximise possibilities of integration. See ARCH1221, ARCH1271, ARCH1241.

ARCH1202

Architectural Design Workshop 3

Architecture Program
UOC8 HPW6

Prerequisite: BENV1101, ARCH1102; Corequisite: ARCH1222, ARCH1272, BENV1242.

Critical research and elaboration of strategic architectural design approaches responding to behavioural, technological and environmental issues. A focus on the implications of design contexts and environmental sustainability for the development of ethical and sustainable design practices and outcomes. Detailed design of medium-scale buildings, with simple programmatic requirements, to a moderate level of integration. Consideration and incorporation of construction assemblies and integrated environmental systems of medium complexity. Individual and collaborative group-based work. A series of studio-based design projects and assignments will be defined within tight thematic and technological limits, and resourced across selected aspects of the History and Theory, Technology and Communications streams to maximise possibilities of integration.

ARCH1221

Architectural History and Theory 3

Architecture Program
UOC4 HPW3

History: Nineteenth-Century architecture and the present. By interpreting certain nineteenth- and early twentieth-century issues and debates, this Module makes it possible to clarify and question contemporary beliefs and achievements, such as technological progress, imperial expansion and the division of labour (which has prevented the exploration of more substantial relationships between the human body and architecture). Lectures will also look to history to reconsider issues which demand contemporary attention, including ornament, decorum, anthropomorphism, empathy and memory. Rather than presenting a survey of nineteenth-century architecture, each lecture will focus on a single issue and explore it through the works of particular architects and writers. The relevance to our current debates will be spelt out. Material is presented as one- and/or two-hour lectures supplemented with readings and analyses of selected texts in architectural history and architectural theory.

ARCH1222

Architectural History and Theory 4

Architecture Program
UOC3 HPW2

Prerequisite: BENV1101, ARCH1121, ARCH1102, ARCH1122; Corequisite: ARCH1202.

An introduction to the architecture of Asia with primary focus on India, China and Japan. Aspects of indigenous traditions as well as developments in the 20th century will be examined. Some attention will be given to materials relating to other countries of the region. The approach of the course is thematic. A range of key concepts, significant buildings and cities will be studied; for instance: the role of geometry, the rise of the modern profession of architecture, cross-cultural exchanges, colonialism, conservation and regionalism.

ARCH1241

Communications 2

Architecture Program

UOC3 HPW3

Prerequisite: ARCH1142, BENV1101.

Through the application of basic drawing, compositional, modelling and rendering practices developed in Communication One, students will extend their ability in techniques of architectural representation. Opportunities will be provided for students to develop skills in model making, using materials such as cardboard, plastics and wood and in rendering techniques, using a selection of media. Students will be encouraged to explore different compositional, modeling and media techniques and critique the implications of their application. Students will develop basic capabilities in professional drawing production and will be required to demonstrate their understanding of architectural drawing conventions and their application in rendering and presentation techniques. A series of well-defined group and individual projects will provide opportunities for students, in tutorial settings, to demonstrate their extended skill and technique development as well as their ability to critique different modes of architectural representation. Integral to the assessment process is the requirement that students provide written evaluation and feedback about their own and their peers completed tasks.

ARCH1271

Architectural Technologies 3

Architecture Program

UOC6 HPW4

Prerequisite: ARCH1171.

Environment: Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Structures: Structural steel design. Material characteristics, analysis and optimisation of structural systems and elements in steel. Design and behaviour of members in bending, shear and axial loading. Load path and action/effect diagrams - the use of to Multiframe. Strength and deflection. An introduction to the structural design of masonry. Codes of practice and Australian Standards. Construction: Steel in construction: framing, wall and roof cladding, basic detailing. Introduction to the Building Code of Australia [BCA]. Footing systems for steel and concrete framed buildings. Basements and retaining walls. Concrete frame, wall, floor and roof systems for low to medium scale buildings.

ARCH1272

Architectural Technologies 4

Architecture Program

UOC4 HPW3

Prerequisite: ARCH1172.

Structures: Structural concrete design. Material characteristics, analysis and optimisation of structural systems and elements in steel. Design and behaviour of members in bending, shear and axial loading. Load path and action/effect diagrams - the use of to Multiframe. Strength and deflection. Codes of practice and Australian Standards. Characteristics of insitu, precast including 'tilt-up', pre- and post-stressed concrete structures. Construction: Concrete in construction - medium to high rise buildings: insitu, precast including 'tilt-up', pre- and post-stressed concrete structures. Basic detailing. Concrete finishes.

ARCH1282

Research Practice

Architecture Program

UOC3 HPW2

A core course which introduces students to basic empirical and interpretive research methods, and referencing requirements. Classes are by lecture and seminar. Assignments are designed to lead students through both theoretical and research in-the-field processes. Critical evaluations of the appropriateness of methodologies used and the value/meaningfulness of conclusions drawn are expected. This course is a prerequisite for Investigation Workshop (final year).

ARCH1301

Architectural Design Studio 1

Architecture Program

UOC8 HPW6

Prerequisite: ARCH1201, ARCH1202; Corequisite: ARCH1321, ARCH1371, BENV1341.

Exploration of the implications of theoretical, historical, technological and environmental factors influencing design thinking, practices, outcomes and modes of representation. An emphasis on the integration of critical research, visualisation, modelling and the development of appropriate design strategies. Detailed design of medium-scale buildings, and medium to large-scale architectural spaces, to an intermediate level of integration. Consideration and incorporation of selected components, construction assemblies and integrated environmental systems of increasing complexity. Predominantly collaborative group-based work.

ARCH1302

Architectural Design Studio 2

Architecture Program

UOC9 HPW6

Prerequisite: ARCH1301.

Exploration of architectural design strategies responding to socio-cultural, tectonic, technological and environmental issues. Incorporation of legal and procedural parameters and constraints such as statutory planning and building codes. Detailed design of medium-scale buildings, with complex site and programmatic requirements, to an intermediate level of integration. Design of complex medium to large-scale architectural spaces, components, constructional assemblies and integrated environmental systems. Predominantly individual work articulated in relation to collaborative group-based objectives. A selection of a series of studio-based design projects and assignments will be defined within tight theoretical, pragmatic and technological limits, and resourced across relevant stream areas to maximise possibilities of integration. Students may apply to carry out exchange studies with universities which have an agreement with UNSW. Any application should be made to the university and is at the discretion of the Head of Program (Architecture).

ARCH1321

Architectural History and Theory 5

Architecture Program

UOC3 HPW2

Prerequisite: ARCH1222, ARCH1202; Corequisite: ARCH1301.

Module 1: Theory: Design and human behaviour. This Module provides an understanding of behaviour-environment theory and its relevance to environmental design and raises questions concerning contemporary values and understandings in architecture. Lectures are presented on elementary behavioural theory, behaviour settings, personal space, territoriality, crowding, privacy, way-finding, place and place-making (genius loci), all of which are examined for their impact on architecture and planning. Aesthetic and functionalist ideas in architecture are cross-related with contemporary notions of meaning, community, identity and polity. Major architectural ideas and design approaches are subjected to scrutiny in light of behaviour-environment research techniques and findings. Material is presented as two-hour lectures supplemented with readings and analyses of selected texts in sociology, psychology, anthropology, environment-behaviour research and architectural theory. Module 2: Theory: Urban theory and practice. This Module deals with architecture and the city, especially as it relates to the nature of the design task. The objective is to bring students attention to our current understanding of urban design and the various roles architects have in shaping the city. Explicit in this analysis will be a redefinition of functionalism in architectural and urban design. Implicit in all designs, if not explicit, is some positive construct of the people imagined as users or participants in the work designed. Questions arise about the adequacy of our definitions and people-constructs, about the degree to which the facts can assist our projections for the future, and on whether our modelling and imaging of life is sufficiently real. Critically evaluating the models we use enhances our creativity because it opens up possibilities that generally fall beyond the scope of our thoughts. Material is presented as two-hour lectures and supplemented by readings in urban theory, town-planning, architectural theory, and people-environment research.

ARCH1371

Architectural Technologies 5

Architecture Program

UOC4 HPW3

Prerequisite: ARCH1171, ARCH1172, ARCH1271.

Environment: Acoustics and noise control: design of rooms, basic shape and volume, acceptable ambient levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noise levels, structural borne and impact sound, reverberation times, selection of building envelope elements, selection of interior building materials and elements. Structures: Systems design and optimisation. Brief survey of advanced structures - including wide span, high-rise and lightweight structures. Construction: Cladding systems for walls and roofs: material selection and detailing. Stair and lift shaft construction and detailing. BCA fire performance requirements

ARCH1381

Professional Practice 1

Architecture Program

UOC3 HPW2

An overview of the profession and an introduction to the legal system. The client architect agreement. Types of building contracts and methods of building procurement. Aspects of the law of contract, torts, agency, trade practices, property and agency. Contract documentation and specification writing techniques. Estimating, feasibilities, cost planning, scheduling, bill of quantities and budgeting.

ARCH1382

Practicum

Architecture Program

UOC3 HPW2

This course is concerned with student preparation of a professional portfolio and the development of capabilities necessary for professional practice employment and academic study overseas. Topics in this component include writing letters of application, preparing resumes, interview and oral presentation techniques, working in teams, developing an understanding of your capabilities and strengths, practice ethics, working in cross cultural environments, negotiating, workplace issues and personal management skills. Students will receive instruction in documenting practice placement diaries and journals. A series of guest lectures and workshop activities will complement the assessable task, which is to complete a well-presented portfolio of student work. The second component of the course is concerned with an introduction to law and ethics relevant to architectural practice - including the architect-client agreement; agency and employment law; appointment of and liaison with consultants; professional codes of conduct; the Architects Act; land use controls; the Building Code of Australia; Local Government Act; Environmental Planning and Assessment Act and the Heritage Act.

ARCH1398

Research Project 1

Architecture Program

UOC6

Prerequisite: ARCH1282.

Introductory project on a topic area selected by the student in accordance with his or her field of specialization. This project provides the opportunity to practice research methods, planning, organising and conducting and documenting study in the chosen field. The topic must be approved by the Program Coordinator and the research supervised by an appropriate member of staff.

ARCH1399

Research Project 2

Architecture Program

UOC9

Prerequisite: ARCH1398.

Advanced project on a topic area selected by the student in accordance with his or her field of specialization. This project represents the culmination and integration of knowledge and skill gained in the student's field of specialization, and should include social, environmental and ethical aspects. The research project report is to be presented in a thesis format and be supervised by an appropriate member of staff.

ARCH1401

Architectural Design Studio 3

Architecture Program

UOC9 HPW6

Prerequisite: ARCH1301, ARCH1302.

The design of medium to large-scale buildings and/or developments, with complex site and programmatic requirements, to a high level of integration. Emphasis on advanced integration of social, pragmatic, technological, urban and environmental aspects. Elaboration and management of implied

conflicting issues and needs - including site constraints, planning controls and building regulations, cultural, behavioural, functional and technical issues. Conservation and heritage values pertaining to adaptive re-use. Individual and group work, articulated in relation to collaborative group-based objectives. A range of studio project options will be offered each session, each with a different focus. Projects will be further defined and resourced by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Communications and Technology Streams. Students may apply to carry out exchange studies with universities which have an agreement with the University of New South Wales. Any application should be made to the university and is at the discretion of the Head of Program (Architecture) UNSW.

ARCH1402

Architectural Design Studio 4

Architecture Program

UOC9 HPW6

Prerequisite: ARCH1301, ARCH1302, ARCH1401.

The design of medium to large-scale buildings and/or developments, with complex site and programmatic requirements, to a high level of integration. Emphasis on theoretical, technological and environmental aspects of the project. Elaboration and management of implied conflicting issues - including theoretical, technological and representational aspects. Individual and group work, articulated in relation to collaborative group-based objectives.

A range of studio project options will be offered each session, each with a different focus. Projects will be further defined and resourced by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Communications and Technology Streams. Students may apply to carry out exchange studies with universities which have an agreement with the University of New South Wales. Any application should be made to the university and is at the discretion of the Head of Program (Architecture) UNSW.

ARCH1470

Building Services 1 & 2

Architecture Program

UOC6 HPW4

Prerequisite: ARCH1271, ARCH1272, ARCH1371.

Sources and distribution of water, wastes and energy supplies, application of electrical power, hydraulics, vertical transport, fire protection in buildings, security, telecommunications. Air conditioning, heating and ventilating of buildings. Equipment selection and space allocations for these services. Students will be able to undertake preliminary selection and sizing of systems, and to translate them into space and planning requirements for complex buildings. Assignments include tutorial projects and/or field investigations, and open book examination. The course requires students to have WebCT access.

ARCH1498

Honours Project 1

Architecture Program

UOC24 HPW0

Prerequisite: ARCH1399.

This project represents a major research-based investigation into a subject related to the student's area of specialization. It should represent an original contribution to work in that area which demonstrates a high level of scholarship and an understanding of good research methods. It can appropriately be seen as stage one of a two-part project linked to the second honours project, but must be complete in and of itself. The work is to be closely supervised by a member of the academic staff. On rare occasions, permission may be sought from the Program Coordinators to have this project supervised by someone outside the University, but there must always be an internal co-supervisor in that event. The intended topic must be lodged as a fully-worked research proposal, and must be approved by the Program Coordinator prior to its commencement. The submitted work must be properly bound and will be assessed internally by at least two readers.

Note: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1499

Honours Project 2

Architecture Program

UOC24 HPW0

Prerequisite: ARCH1498.

This project represents a major research-based investigation into a subject related to the student's area of specialization. It should represent an original contribution to work in that area which demonstrates a high level of scholarship and an understanding of good research methods. It can appropriately be seen as stage two of a two-part project linked to the first honours project, but must be complete in and of itself. The work is to be closely supervised by a member of the academic staff. On rare occasions, permission may be sought from the Program Coordinator to have this project supervised by someone outside the University, but there must always be an internal co-supervisor in that event. The intended topic must be lodged as a fully-worked research proposal, and must be approved by the Program Coordinator prior to its commencement. The submitted work must be properly bound and will be assessed internally by at least two readers.

Note: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1501

Investigation Workshop

Architecture Program

UOC9

Prerequisite: ARCH1282, ARCH1302, ARCH1371, ARCH1401, ARCH1402, ARCH1583.

Critical research, exploration and speculation, leading to the detailed definition of a proposal for an individual design project. An emphasis on the ethical and political dimensions of architectural practice as a public act. A focus on the integration of theoretical, socio-cultural, programmatic, technological and professional issues. Individual submissions developed within a collaborative and supportive peer-group environment. Proposals will be initiated, researched and elaborated by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Technology and Communications streams. Preparation of an investigative study and detailed conceptual and functional design brief, articulating the parameters, values, objectives, components and implications of the project. Communication of the proposal through seminars, concept drawings/models and investigative reports.

ARCH1502

Graduation Project

Architecture Program

UOC9

Prerequisite: ARCH1371, ARCH1501, ARCH1583.

Design development of the project defined in Investigation Workshop. Further elaboration of the project framework, content, criteria and parameters through elective specialization. Detailed resolution and presentation of the design to an advanced level of integration across all dimensions of the project: theoretical, historical, ethical, technological, environmental and professional. Individual submissions developed within a collaborative and supportive peer-group environment. Presentation of the project to peers, eminent critics and practitioners through various seminars, forums, and a high profile end of session graduate exhibition.

ARCH1582

Professional Practice 2

Architecture Program

UOC6 HPW4

Prerequisite: ARCH1371

Legal implications of architectural practice. Liabilities of architects. The architect/client agreement. Types of building contract and methods of building procurement. Tendering and negotiating. Contract administration procedures. Professional defensive measures and crisis management. Introduction to management theory. The structure and organization of an architectural office. Aspects of company and partnership law and insurance. Business principles and management procedures relevant to an architectural practice. The course will examine the production of architecture as a social event, it will analyse a series of explanations of the relationships between society and space and will look at both Asian and Western cultures as examples. The focus of this analysis will include issues such as: the role of economics and politics, urban administration, cultural difference, social theory etc, to architecture. This will be carried out by examining questions such as what is the relationship between architecture and urban politics? What part does architecture play in the political economy of cities? How does architecture as a commodity reflect commodity producing society as a whole? What basic social theories inform what we might call a social theory of architectural production? How do investors, developers, industrialists and others view architecture

and building? What is the administrative environment for the production of architecture? (Government policy at national, regional and local levels, development planning, planning legislation, structure and local plans etc). How does architecture relate to the reproduction of culture - what theories of cultural production exist, and how do they interface with urban politics? What part does architecture play in the sustainability of cities and urban environments as a whole?

ARCH1583

Work Experience

Architecture Program

UOC24

Prerequisite: BENV1101, ARCH1102.

This course provides an opportunity for students to gain off-campus experience in the discipline and profession of Architecture. Each student is required to undertake twenty four weeks of activity with the minimum single period of approved activity being eight weeks. The preferred activity is to work under the supervision of a registered Chartered Architect for the twenty four week period. This period of activity must be undertaken outside the formal academic session. Students undertaking this activity during the academic session shall not be enrolled in any other courses. This course must be completed before commencing ARCH1501- Investigation Workshop. For students to achieve a satisfactory assessment they must provide documented evidence of undertaking the preferred activity. Students have two options in providing evidence. Firstly, by using the accepted form of log-book provided by the Architects Accreditation Council of Australia or other professional bodies. Secondly, submitting a signed letter from their supervising registered Chartered Architect outlining the dates and period of time they were employed, their responsibilities and the activities / projects they have been engaged in. On completion of the course requirements students are required to submit the selected documentation to the Faculty Student Centre. Where students wish to undertake other activities such as an architectural study tour, employment on construction projects or other related architectural activity, a proposal must be submitted to the course authority for approval. Students are required to document these activities in accordance with guidelines issued by the Head of Program. The Faculty reserves the right to disallow any activities as meeting the requirements for this course, for which prior approval has not been sought and obtained in writing.

ARTS2000

Arts and Social Sciences Internship

School of Social Science and Policy

UOC6 HPW3

Prerequisite: 36 units of credit

This practical workplace experience is accompanied by a reading program. The reading component examines different approaches to the study of organisations, their structures, functions and policies, and links these issues to the internship experience.

Note: Students must have achieved a credit level or better average across the courses in their degree.

ARTS3001

Censorship and Responsibility in the Performing Arts, Film, Literature and Media

School of English

UOC6 HPW3

Prerequisite: 48 units of credit; Excluded: THF12020

Investigates ethical issues in the production and reception of cultural works, including live performance, film and television programs, literature, popular music, advertising and the internet. Particular topics to be addressed include the moral responsibilities of production companies and media organisations, and the function and impact of regulation and legislation.

Note: Offered jointly by the Schools of English and Media, Film and Theatre.

ARTS3002

Making Histories and Historians: Ethics, Scholarship and Public Roles

School of History

UOC6 HPW3

Prerequisite: 48 units of credit

Introduces students to the social role, impact and responsibilities of historians. Seminars deal in a practical way with professional ethics; scholarly standards concerning bias, interpretation and plagiarism; the impact on these standards of new ideas of postmodernism; new methods and evidence in history and the ethical dilemmas these methods and

procedures may raise; the use and abuse of history in public discourse and in education.

Note: Offered jointly by the School of History and the School of History and Philosophy of Science.

ARTS3005

Arts and Social Sciences Graduates in the Workplace: Ethical and Social Responsibility

School of Social Work

UOC6 HPW3

Prerequisite: 48 units of credit

Arts and Social Sciences graduates are employed in an enormous range of capacities throughout the workforce, where they are routinely called upon to exercise their ethical and social responsibilities. Combines orientational lectures from Faculty academic staff with presentations by graduates who discuss the nature and consequences of their university education, and issues of ethical and social responsibility from the perspective of their own workplace experience. Weekly seminars allow students to pursue in depth the issues raised by graduates' presentations and to relate these issues to the purposes and consequences of their educational experience at UNSW.

Note: Offered by the School of Social Work.

ARTS3006

Corruption and Integrity in Public Life

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 48 units of credit

Debates over corruption and integrity in public life are intense, with the actions of public officials, government bodies and citizens coming under increasing scrutiny. Addresses debates about how individuals and institutions should behave in public life, drawing on a range of ethical perspectives and on case studies from different countries. Issues include at least some of the following: conflicts of interest; the limits of serving the public; lying and honesty; bribery and gifts; sex and sleaze; partiality and impartiality; the responsibilities of government to non-citizens (war, overseas aid, immigration, etc); the role of culture in defining corruption and ethics; whistle-blowing; civil disobedience; limiting corruption and promoting integrity through codes of conduct, watchdog bodies and constitutional engineering.

Note: Offered by the School of Politics and International Relations.

ARTS3007

East Asian Values and Identities

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 48 units of credit

Introduces the recent stages in a discussion of values, which has accompanied East Asian awareness of an identity crisis for well over a century. This discussion has produced a new notion of East Asian business and work ethics and contributed to the formation of a new complex and controversial East Asian identity. The Confucian focus on self-discipline, family coherence, hierarchical order and social status will be contrasted with the traditional focus on health, preservation of life and energy, individual identity and integrity, and personal spontaneity. Analysis will be from an East Asian perspective.

Note: Offered jointly by the School of Modern Language Studies, the School of Philosophy and the School of Politics and International Relations.

ARTS3010

Feminist Thought and Action

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 48 units of credit; Excluded: GENT1206

Addresses both general concerns and principles of Australian feminism and their application to a sample of specific issues involving personal and public life. Sets current feminist demands within the social context of past failures and achievements. Feminist questions provide the opportunity to examine the basis of conventional ethics and social responsibility. The feminist influence on academic discourse is also examined. Changes in subject content and tools of analysis will be explored. Students will be encouraged to examine their own educational experiences from a feminist perspective in order to extend their critical analysis skills.

Note: Offered by the School of Sociology and Anthropology.

ASIA1001

Introduction to Contemporary Asia

Department of Chinese & Indonesian Studies

UOC6 HPW3

Deals historically with the great civilisations of Asia, and the transformations which produced modern Asian states. Topics include: religion, society, politics, economic and social conditions in contemporary China, Indonesia, Japan and Korea. Students will be encouraged to complete one major task on their country specialisation and one outside the specialisation.

ASIA1002

Introducing Southeast Asia

School of History

UOC6 HPW3

Prerequisite: Enrolment in Program 3424 or 4765; Excluded: HIST1010

Introduces students to the history of the Southeast Asian region through a survey of the major eras from the classical civilisation of Angkor, Pagan and Borobudur up until the early twentieth century. Beginning with the religious and cultural traditions of Southeast Asia, kingship and power, pre-colonial society, colonial society and nationalist visions are explored. Analyses the ideas of nationalist figures like Jose Rizal and Sukarno, as well as peasant rebellions against colonialism and capitalism. The Philippines, Indonesia, Cambodia, Burma and Thailand receive particular attention.

ATAX0001

Basic Tax Law and Process

Board of Studies in Taxation

UOC6

This course is an introduction to the legal system and lawyers' reasoning. It also gives an overview of the Australian tax system, with emphasis on income tax and it deals, in some depth, with key income tax concepts. The skills of handling cases and statutes are developed using income tax material. The course builds these skills systematically, from the basic skill of extracting the binding rule from a case and consciously addressing the choices delegated to judges and bureaucrats by statutes, to skills of synthesising groups of cases, dealing with conflict and ambiguity in case law and applying statutes and cases to real world problems. In the final module, the policy implications of tax decisions are introduced. The course is the foundation for a first tier university approach to tax and it is constructed on this premise. A critical approach is emphasised throughout. Emphasis is put on the increasing importance of statutory construction and the new approaches necessary to adapt to a simplified tax system and rapid change. Students are encouraged to think beyond the traditional categories in textbooks which have inhibited effective critical thinking and to understand how key income tax concepts operate across traditional categories.

ATAX0002

Computer Information Systems

Board of Studies in Taxation

UOC6

This course aims to provide the student with an understanding of the content of information systems, the types of systems and their position in society and at an organisational level. It emphasises the growing interdependence between business strategy, rules and procedures on the one hand and information systems software, hardware, data and telecommunications on the other. This course addresses the importance of data and the structuring of data and seeks to provide an introduction to the systems development life cycle, design concepts, data analysis and models and data communications. In addition, this course presents the student with an overview of information systems in order to enable each student to fully understand the concepts involved in general systems development.

ATAX0003

Microeconomics and the Australian Tax System

Board of Studies in Taxation

UOC6

This course provides an introduction to basic microeconomic concepts and skills, and demonstrates their use in order to gain a clear understanding of economic problems and policy issues relevant to the Australian economy. It introduces students to the economic behaviour of small decision-making units such as households, firms and government agencies, with particular reference to the effects of taxation on markets. Emphasis is placed on analytical skills and key concepts which are relevant to tax professionals including, for example, opportunity cost, market equilibrium, elasticity,

substitution and income effects, tax incidence and efficiency costs of taxation.

ATAX0004

Framework of Commercial Law

Board of Studies in Taxation
UOC6

This course deals with the basic principles of contract law, agency, misleading and deceptive conduct, cheques and bills of exchange. The course is a building block in the understanding of basic concepts of the enforceability of promises; it deals with the basic principles of misrepresentation, illegality and termination of contracts, and provides an introduction to statutory and equitable remedies applicable where contractual obligations have been broken.

ATAX0005

Accounting 1

Board of Studies in Taxation
UOC6

This is the first course in a sequence of courses dealing with the profession and the practice of accounting and the literature associated with it. Students will be introduced to: the design of accounting information systems (classifications and chart of accounts, cash or accrual systems, concept and measurement selection, continuous or periodic recording); systems of accounting record (the accounting equation, document flows, accounts and ledgers, the double-entry systems, journals and subsidiary ledgers internal and accounting control); recording merchandising operations (sales, purchases, returns, allowances, receipts, payments, inventory effects); accounting for receivables and payables; inventories; and accounting for non-current assets.

ATAX0006

Tax Administration

Board of Studies in Taxation
UOC6

This course examines the operation of tax institutions in Australia's mass decision making process. It includes self-assessment and decision making in the bureaucracy, statutory review in the AAT and courts, the basics of administrative law and the Ombudsman's role. It deals with rulings, information collection powers, powers to collect tax owing and impose penalties. It includes taxpayer protections like the Charter of Taxpayer Rights and Freedom of Information. The course emphasises a coherent, critical understanding of the decision making system and its practical administration.

ATAX0008

Principles of Capital Gains Taxation

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0001

This course deals with Australia's capital gains tax regime. The course begins with a study of the theory behind taxing capital gains and its place in the income tax base. This is followed by an examination of the background leading to the introduction of Australia's first system for taxing capital gains and why that system was altered to our present system. The main features of the current legislation are then examined in detail, including its structure, main concepts and principal operative provisions. The course concludes with a look at the main concessions and exemptions available to individuals and small business.

ATAX0009

Law of Companies, Trusts and Partnerships

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0001

This course deals with the law relating to these particular entities, with an emphasis on the principles that are important to their operation and organisation. In company law, the course covers such issues as legal personality, share and capital structure, company debt, directors' duties, the enforceability of contracts with a company, insolvency and winding up. Trust law deals with the nature of a trust, the obligations and duties of trustees and the nature of a beneficiary's interest in a trust, while partnership law covers the nature of a partnership and the rights and obligations of partners.

ATAX0010

Accounting 2

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0005

This course is complementary to ATAX0005 Accounting 1, and completes the preparation of the financial reports using the Australian regulatory requirements. It examines the shareholders' equity and liability section of the statement of financial position and the preparation of the statement of cash flows. Against this background, students prepare and analyse the general purpose financial reports prepared for the external users and examine the information and reports prepared for management decision making.

ATAX0011

Macroeconomics, Government and the Economy

Board of Studies in Taxation
UOC6

Macroeconomics is the study of the entire economy and typically deals with policy issues of unemployment, business cycle, inflation/deflation, current account deficit, foreign debt and government deficits. These areas of study have been greatly influenced by the Keynesian revolution in the 1930s and subsequent developments in macroeconomic thought. This course provides students with an introduction to macroeconomic concepts and theory, with particular reference to the current macroeconomic issues and the role of the government in the Australian economy. In particular, it concentrates on the interaction of the taxing and spending of government with the wider economy.

ATAX0013

Taxation of Companies, Trusts and Partnerships

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0009

This course deals with the taxation of companies, partnerships and trusts, the key structures for business and investment in Australia. This comparative treatment emphasises a coherent understanding of the tax structures and a critical appreciation of the reasons for them. The course deals with practical problems arising from concepts of legal personality (or the lack of it), dual tax at the entity and member level, including the various distribution rules and operation of company franking mechanisms. The course also considers the divergences between the taxation of different structures, and the practical consequences of these divergences. Students should have completed or be enrolled in ATAX0009 The Law of Companies, Trusts and Partnerships.

ATAX0014

Tax Policy Framework

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0003

This course is an introduction to tax policy making in Australia. The emphasis is on economic models. It covers relevant aspects of public finance and welfare economics. It examines choices between the public and private provision of goods, issues of fiscal federalism, constitutional constraints on the division of taxing powers and an evaluation of modes of decision making. A critical understanding of major issues is injected. This covers the justification for the public sector, the financing of the public sector, mainly by taxation, the consequences for the economy at the micro and macro levels arising from taxation and some specific tax reform issues.

ATAX0015

Intermediate Financial Accounting

Board of Studies in Taxation
UOC6

Prerequisite: ATAX0005, ATAX0010

This course is concerned with external financial reporting and, in particular, the accounting and reporting practices of listed companies. It is an issues based course where more complicated business transactions and events are considered, as well as accounting problems in certain specific areas. The regulatory requirements for preparation of a set of company financial statements together with the continuous disclosure requirements and voluntary disclosures made by companies are examined. Alternative accounting practices and issues, and the choice of technique by different preparers of accounts are also examined. Emphasis is placed on the understanding of the theory of accounting and its development.

ATAX0016**Critical Perspectives and Ethics**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001

This course requires students to evaluate critically key aspects of Australia's tax system especially relating to tax evasion and avoidance. It asks students to evaluate the ethical behaviour of participants in the tax system. It ensures that students understand the ethical rules of Australia's leading professional accounting and legal bodies. It explores legal controls on professional actions and civil liability. It reviews why rules are obeyed and explores whether formal sanctions at the legal or professional level lead to ethical conduct. It concludes with an in-depth analysis of Australia's specific and general anti-avoidance provisions.

ATAX0017**Tax Accounting Systems**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001, ATAX0005

The primary focus of the course is upon issues of timing. Earlier courses have concerned themselves with the question of what constitutes taxable income. Tax Accounting Systems moves the analysis to issues that are concerned with when. When should income be brought to account? When are deductions to be taken? In other words, the emphasis shifts to the basic question of how we achieve a fair reflex of the gain for a particular period. This course is intended to provide a practical analysis of the area of tax accounting in its broadest sense, and therefore also covers trading stock, depreciation and the Simplified Tax System.

ATAX0018**Tax Litigation**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001, ATAX0006

This course introduces the principles of civil procedure and evidence for taxation dispute resolution. It covers the commencement of proceedings, pre-trial procedures, the course of the trial, and the rules of evidence, in the particular context of Federal Court and Administrative Appeals Tribunal proceedings. This course also includes a skills component called Moot Court and Oral Communication. Students are required to present formal oral argument on a typical tax problem before a judicial style Tribunal. Student assessment is formal, based upon presentation and participation.

ATAX0020**Introduction to Australian International Taxation**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001, ATAX0009

This course is designed to provide a broad overview and understanding of the most important elements of Australian tax law as it affects international transactions. It includes analysis of: Australian residency for tax purposes; Australian source rules; the taxation of residents in respect of their foreign sourced income (including an overview of controlled foreign companies legislation); the taxation of non-residents in respect of their Australian sourced income; the operation of Australia's double tax agreements; and the competing policy factors inherent in the design of an international tax regime.

ATAX0022**Goods and Services Tax: Design and Structure**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001

This course explores the conceptual and theoretical issues which have influenced how a GST/VAT finds implementation in practice around the world. Attention is given to how different goods and services are treated under the tax and how the tax is administered in practice. Issues such as the importance of planning by government and business for the successful operation of a GST and its compliance and administration costs are considered. Importantly, it explores conceptual issues arising during the transition from a tax like a Wholesale Sales Tax to a GST along with the management of the economic impact of introducing a GST.

ATAX0023**Principles of Goods and Services Tax Law**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0001

The course works through all aspects of the GST law and looks briefly at the underlying policy implications of each area of the law. The object of this course is to provide conceptual and analytical knowledge of GST appropriate for the practical requirements of business, legal and accounting advisers working with GST on a regular basis. The course explores complex legislative and policy structures so that we acquire expert knowledge of what the law is meant to do, what it actually does and where problems arise. Recommended prior knowledge: Completion of ATAX0022 Goods and Services Tax: Design and Structure.

ATAX0053**Accounting for Complex Structures and Instruments**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0015

This course is concerned with the accounting issues posed by complex financial transactions and organisational structures. It looks at the issues concerning the accounting for various extended entities, such as corporate groups, associated entities and joint venture arrangements. Other relevant accounting and reporting issues for large corporations are addressed such as segment reporting. Finally, complex issues such as accounting and reporting requirements for foreign currency transactions, off-shore operations, and financial instruments are addressed. Careful treatment of these issues is essential to fairly determine the income and financial position of particular business entities.

ATAX0055**Taxation of Property Transactions**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0008, ATAX0023

Property transactions are one of the most common and significant dealings within most tax bases. This course examines all income tax, CGT, GST, land tax and stamp duty consequences of acquiring, holding, developing, building on, leasing, disposing of or otherwise dealing with land and buildings, including investment options such as property trusts and their structuring. Income tax considerations dealt with include property sale or development, financing, income recognition, rent, home offices, lease incentives and deductions. CGT, GST, land tax and stamp duty as applied to freehold, leasehold, residential and commercial property are considered, including their many special rules and concessions.

ATAX0057**Business Finance**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0003, ATAX0010, ATAX0058

Business Finance is an introductory course in financial management designed to meet the professional requirements of Australian accounting bodies and other objectives. It stresses the modern fundamentals of corporate financial decision making with special reference to investment, financing and dividend distribution decisions. Specific topics to be covered include: financial mathematics, security valuation, techniques for capital investment decisions, financial decision making under uncertainty, corporate capital structure, cost of capital, and dividend decision and policy. As students undertaking this course already will have acquired substantial tax knowledge, the course allows a student to analyse the tax effects more deeply than a traditional undergraduate Business Finance course would dare. This tax analysis makes this a more practical than a normal introductory finance course. While the course can be taken as a terminating unit, its contents form the foundation for advanced studies in banking and finance such as funds management, international finance, banking, risk and insurance, electronic security trading, investment banking, electronic commerce, options and futures and derivatives. As the field of banking and finance is rapidly expanding, the foundation knowledge gained from this course opens up opportunities for further studies and/or employment in the domestic and global financial markets.

ATAX0058**Quantitative Analysis**

Board of Studies in Taxation

UOC6

Quantitative Analysis is an introductory course in mathematical and statistical concepts and techniques with applications in commerce and taxation. This course will train students in essential quantitative skills and show how these skills can be used in formulating and solving a wide variety of problems in economics, accountancy, finance and taxation. In this course the application of mathematical and statistical methods are more than mere illustrations; they constitute an integral part of the course material. Quantitative Analysis is intended to be as comprehensive and self-sufficient as practicable. It introduces and develops ideas and techniques from the basic principles, assuming very little knowledge on students' part.

ATAX0059**Management Accounting**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0010

Management accounting systems are designed to provide managers in all types of organisations with information to assist them in decision making, planning and control. This course addresses how management accounting provides information to meet the organisation's and manager's compliance, control and competitive support needs. The goals of this course are to acquaint students with the fundamentals of management accounting, and to permit students to analyse the impact of choices that are made in the design, implementation and operation of management accounting systems.

ATAX0060**Auditing and Assurance Services**

Board of Studies in Taxation

UOC6

Prerequisite: ATAX0015

This course examines the practice of auditing and the concepts which underlie the practice within the assurance framework. Although a large part of the course does cover the financial report audit, the other forms of audit are discussed. The course is intended to provide an overview of the audit process as it exists in Australia. The aims of the course are to develop students' understanding of the audit function; familiarise students with the professional, legal, commercial and regulatory constraints within which audits are carried out; and examine techniques used by auditors including risk analysis, evidence collection and evaluation, and audit reporting.

ATAX0605**Taxation of Trusts**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course thoroughly explores issues relating to private trusts and describes those applicable to public trusts. It explains the nature of a trust and the differences between types of trust. It critically examines the taxation of income of a trust. Thereafter it considers taxation of capital gains derived in the context of trusts, and the potential application of the special and general anti-avoidance provisions to trusts where they are used for purposes of income-splitting or income-diversion. Finally, there is discussion of the reforms to the taxation of trusts and their implications.

ATAX0607**Taxation of Corporate Finance**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The course deals with the fundamental building blocks, both theoretical and technical legal, of taxation of corporate finance. It focuses on debt finance but also covers aspects of equity financing. It provides thorough grounding in basic concepts like the time value of money, the deductibility of interest, and the debt/equity distinction. The course deals in depth with temporal apportionment, with taxation of discounted and deferred interest securities and with leasing finance. It introduces hybrid instruments and derivatives, which are explored in more depth in ATAX0321/0421 Taxation of Structured Finance. This course complements ATAX0303/0403 Taxation of Corporations.

ATAX0610**Taxation of Superannuation**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The aim of this course is to provide students with a thorough understanding of the current taxation principles applicable to superannuation. There are taxation consequences involved in every aspect of superannuation. Thus, the course examines the taxation consequences for persons making contributions to superannuation funds. It then examines the taxation of superannuation funds themselves (both complying and non-complying funds) and, finally, it examines the taxation of benefits (both lump sums and pensions) paid by superannuation funds to their members. The course also examines the operation of the Superannuation Guarantee (Administration) Act 1992, which imposes a superannuation guarantee charge (a form of tax) on those employers who do not make the minimum superannuation contributions specified in that Act. Finally, the course provides an introduction to the provisions of the Superannuation Industry (Supervision) Act 1993.

ATAX0614**Selected Problems in Stamp Duty**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides a general knowledge of Australian duty law, identifying the common themes and important areas of divergence across the various states. The course critically analyses the concepts behind duties in Australia, covering the main rules and problem areas. The course examines duty on transfers of dutiable property, leases, transfers, dutiable transactions and trusts. Although the course has broad focus, duty rules in New South Wales, Victoria, Western Australia and Queensland are specifically covered.

ATAX0615**Taxation of Industry and Technology**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The tax system is used to support industry through special incentives. Some target specific industries (primary production, mining and energy, films), some target sectors of the economy (small business), while others apply to industry generally (research and development, intellectual property). Modern modes of doing business, most notably the advent of e-commerce, also present problems in the traditional application of tax laws.

This course covers special tax rules and incentives that apply to persons or entities operating in specific industries or sectors of the economy, including small business, as well as more general incentives to encourage inventiveness and increase competitiveness. Concentration is on productive sectors of the economy (as opposed to financial services) and extends to taxation of e-commerce. Coverage includes a critical analysis of why special rules exist and the desirability and effectiveness of using the tax system to achieve government industry policy.

ATAX0625**Taxation of Employee Remuneration**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides a comprehensive coverage of the taxation issues relating to the taxation of employee remuneration. The course commences by examining the employer/employee relationship, contrasting it with the principal/independent contractor relationship. Fringe benefits tax and tax collection obligations imposed on employers, including under PAYG and the payroll tax system, are considered in detail. Employers' obligations and employees' rights under the superannuation guarantee system are examined, as are the rules on the deductibility of superannuation contributions and the taxation of payments made on termination of employment. The course concludes with an examination of the rationale and tax consequences of salary packaging, and the ATO's response to arrangements aimed at avoiding tax on payments for services performed.

ATAX0626**Taxation and Investment Regulation in China**

Board of Studies in Taxation

UOC6

Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides comprehensive coverage of the tax system and investment regulation in China. Students completing the course will obtain a thorough working knowledge of the practical operation of China's tax and investment regulatory system in the context of common business, investment and employment activities.

Topics covered include: The enterprise and individual income tax, private enterprise regulation, foreign investment regulation, the value added tax, the business tax, Chinese business vehicles including companies, double taxation agreements, incentives and special zones.

ATAX0921**Fieldwork Research Project**

Board of Studies in Taxation

UOC6

This course must be completed within the session for which the student enrolls in that course and within two (2) calendar years of the end of the year in which the candidate completes the last program requirement for the Associate Diploma in Taxation other than ATAX0921 Fieldwork Research Project. (The Associate Diploma in Taxation is not available to students entering ATAX Programs in 2002 or later.)

ATSI1001**Introduction to Aboriginal People and Society**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Provides an historical and conceptual overview of Aboriginal people, cultures and societies in Australia. Introduces key concepts such as relationship to country, cultural identities, Indigenous knowledge systems, language, spirituality, ceremony, kinship, social and governance systems past and present and introduces Indigenous perspectives on debates on Australian history and culture as sites of contestation.

ATSI1002**Australia: Representations, Identities and Difference**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Excluded: AUST1001

A multidisciplinary study of Australian popular culture focusing on the nature of Australian identity. Examines film, television, newspapers, including fictional and non-fictional material (documentaries, biographies, autobiographies). Draws particularly but not exclusively on the way images of Aborigines and of Australian women (both black and white) have been created.

ATSI2001**Aboriginal Australia: The Pre-Colonial and Colonial Experience**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2002, AUST2004, GENS4521, GENS5527

Examines pre-colonial and colonial Aboriginal Australia in areas such as social organisation, Indigenous knowledge and connections to country. The effects of European colonisation from policies of 'protection' through to those of 'assimilation' are explored. Also critically examines the legacy of colonisation and the continuing consequences of this history for contemporary society through the study of film, Indigenous languages, education and the archival record.

Note: The course is distinct from, but complementary to ATSI2002.

ATSI2002**Aboriginal Australia: The Post-Colonial Experience**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2003, AUST2005, GENS4521, GENS5526

Examines political and social constructs of contemporary Aboriginal Australia and the processes which have shaped them. Contemporary issues which affect Indigenous Australians, such as health, education, racism, land rights and law will be examined. The structural position of Aboriginal people within Australian society will be contextualised within the theory that colonialism is an ongoing experience for Aboriginal

Australians. Considers the implications for the future of Aboriginal self-determination and reconciliation in relation to contemporary government initiatives.

Note: The course is distinct from, but complementary to ATSI2001.

ATSI3001**Colonisation and Indigenous Identity Formation**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA3208, SOCC3701

Investigates the formation of contemporary Indigenous identities in the context of the ongoing colonisation of Australia. Explores the interplay between culture and identity and analyses the various historic and academic constructions of Aboriginality. The history of imposed colonial notions of Aboriginal identity and their consequences for both Aboriginal people and non-indigenous Australians are identified and examined. The use of contemporary media such as film, television, literature and art are examined as case studies in the analysis of contested identities.

ATSI3002**Indigenous Australia: Gendered Identities**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2012, SOCA3209, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and the present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race, and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

ATSI3003**Cultural Heritage Management**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPSC2881, SCTS3120

Over 40,000 years of human habitation has helped to shape Australia's environment. Examines the policies and processes of managing both Aboriginal and non-Aboriginal (historical/European) 'cultural heritage'. It will define the notion of 'cultural heritage' and examine to what extent the Australian environment may be defined as 'natural'. Identifies and examines the values attributed to cultural heritage items, sites and places by a variety of interest groups, and critically examines the legal, ethical and policy requirements which dictate management processes.

ATSI3004**Aboriginal People and Social Work**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCW2100

Examines the history and current legacy of colonisation and government policies for Indigenous Australians and their position in contemporary Australian society. Social movements and actions relevant to Indigenous Australians' social experience will be discussed. Addresses in particular the skills social workers need to work with Indigenous clients and what role social work can play in progressing equity and social justice for Indigenous Australians.

ATSI3005**Whiteness Beyond Colour: Identity and Difference**

Nura Gili (Indigenous Programs)

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA3210

Whiteness is generally assumed to be the norm in classifying difference. It is also assumed to be neutral. Delves into whiteness as a mode of identification and whether it can be assumed to be the norm as well as neutral. Topics include whiteness as Other, whiteness as a non-Indigenous identity, and whiteness in coloniser societies. Explorations of whiteness as a representation of oppression and as transformation will be addressed.

AUST1001**Australia: Representations, Identities and Difference**

School of English

UOC6 HPW3

Excluded: ATSI1002

A multidisciplinary study of Australian popular culture focusing on the nature of Australian identity. Examines film, television, newspapers, including fictional and non-fictional material (documentaries, biographies, autobiographies). Draws particularly but not exclusively on the way images of Aborigines and of Australian women (both black and white) have been created.

AUST1003**Paradise Lost? Australian Environmental History**

School of History
UOC6 HPW3

How has the landscape shaped the definition of what it means to be Australian? Why was the bush so often seen as a place of the weird and the monstrous? Have white Australians learned from Aboriginal relationships with the natural environment? Looks at the climatic, cultural, political and economic forces which have shaped the Australian landscape from the period before known human settlement until the present, taking a dynamic approach to the relationship between humans and their environment. Draws on a broad range of disciplines, including literature, geography, history, politics, sociology and cultural studies.

AUST2004**Aboriginal Australia: The Pre-Colonial and Colonial Experience**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI2001, AUST2002, GENS4521, GENS5527

Examines pre-colonial and colonial Aboriginal Australia in areas such as social organisation, Indigenous knowledge and connections to country. The effects of European colonisation from policies of 'protection' through to those of 'assimilation' are explored. Also critically examines the legacy of colonisation and the continuing consequences of this history for contemporary society through the study of film, Indigenous languages, education and the archival record.

Note: The course is distinct from, but complementary to AUST2005.

AUST2005**Aboriginal Australia: The Post-Colonial Experience**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI2002, AUST2003, GENS4521, GENS5526

Examines political and social constructs of contemporary Aboriginal Australia and the processes which have shaped them. Contemporary issues which affect Indigenous Australians, such as health, education, racism, land rights and law will be examined. The structural position of Aboriginal people within Australian society will be contextualised within the theory that colonialism is an ongoing experience for Aboriginal Australians. Considers the implications for the future of Aboriginal self-determination and reconciliation in relation to contemporary government initiatives.

Note: The course is distinct from, but complementary to AUST2004.

AUST2008**In the Firing Line: Australians go to War**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2078

Examines the importance of the experience of war in shaping Australia; its contribution to definitions of nationality, ethnicity, citizenship, masculinity and femininity; the extent to which it has defined and/or redirected Australia's relationships with her allies from the colonial period to Vietnam. Focuses on the battle zones and looks at the way that participants understood and represented the experience of war, drawing on literature and film, personal letters and diaries, reminiscences and oral interviews as well as official records. Includes an optional field trip to the Australian War Memorial in Canberra.

AUST2009**Australian Urban Environments**

School of English
UOC6 HPW4

Prerequisite: 36 units of credit; Excluded: ENVS2020, GEOG2641, GEOH2641

Examines human environments in Australia. Theoretical frameworks include political ecology, economic and poststructuralist geography.

Begins by exploring ideologies of human-nature relations. Urban and natural landscapes, the built environment and planning principles are all considered as cultural constructions - as concepts linked to ideologies of human nature-nature relations. Considers environmental impacts of urbanisation, population growth and economic production that stem from different articulations of human-nature relations, and discusses forms of resistance, theories of environmental justice and participatory decision-making that seek to transform human-nature relations. Practical classes include field exercises and introductory Geographical Information Systems (GIS) workshops.

AUST2010**Society and Environmental Process: Botany Bay**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: HPSC2500 or HPSC2550 or SCTS2118 or SCTS3106; Excluded: HPSC3500, SCTS3013, SCTS3020, SCTS3126

Interprets the concept of the social construction of the environment in the specific context of Botany Bay and its region. Environmental issues are identified and examined in the light of historical, sociological, economic and political developments at the regional, national and global levels. Prospects and processes for intervention.

In addition to other work, each student completes a substantial research project.

AUST2011**Australian Migration Issues**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA3407, SOCI3614, GENT1209

An examination of racial, ethnic and social issues surrounding migration to Australia. Topics will be drawn from: an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

AUST2012**Indigenous Australia: Gendered Identities**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI3002, SOCA3209, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

AUST2014**Twentieth-century Australian Literature**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL2300, ENGL2520

An examination of some major post-colonial issues in Australian writing of the twentieth century.

AUST2015**Contemporary Australian Women Writers**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL2621, ENGL3401

Examines the particular concerns of a selection of contemporary Australian women novelists, poets and a short story writer. In the process asks whether women write from a different perspective, or have different concerns from their male counterparts in a culture that is generally considered to be male-dominated. Also considers the special question of women writing about the land.

AUST2017**Labour History**

School of English
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: IROB2715

Focuses on the transformation of working life in nineteenth and twentieth century Australia and changes in management. Considers the origins and development of the Australian labour movement and laborism. Themes covered include the nature and purpose of historical inquiry and research methods; the origins and development of labour markets and trade unions; the emergence of working class culture and consciousness; the influence of gender, race, ethnicity and locality on worker outlook and agency; worker political mobilisation and the rise of party politics; the role of the state in industrial relations; the impact of radical ideologies; immigrant and Aboriginal workers and the role of women in paid employment.

AUST2018

Australian Sport: History and Culture

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2041

Urbanisation transformed the shape of sport and popular culture and created an industry of mass entertainment. Explores how and why this transition took place in 19th-century Australia and England and what it all meant in personal, familial, regional and national terms. Topics include: historiography of sport and mass culture; the leisure revolution in 18th-century Britain; the rise of organised sport and mass culture in Australia; and the social and political implications of new leisure institutions.

AUST2019

A Commonwealth for a Continent: Australia 1901-1949

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2027

Major developments in Australian History in the period from Federation to the beginning of the Cold War. Themes include: Federation, White Australia policy, defence, foreign affairs, entertainment, federal-state relations, labour, World War I and its impact on society, women's rights, the experience of the Great Depression, the impact of World War II, Aboriginal people, work and politics.

AUST2020

Australia since World War II

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2028

Major developments in Australian Society since World War II. Topics include: immigration, religion, culture, government, education, comparative welfare history, external relations, women's experiences, media studies, Aboriginal culture and politics, the impact of the Vietnam war, tough times and the 1980s, Australia and America, sporting culture and Olympism, television and the media, Australia and Asia, and the emergence of the new commercial and communication systems of 'the Information Age'.

AUST2023

Regional Australia: Geographies of Uneven Development

School of English

UOC6 HPW4

Prerequisite: 36 units of credit; Excluded: GEOH3641

Key concepts and theories in regional economic geography. Theories of location and regional development, spatial interaction, uneven development, and structural change. Economic and regional problems in Australia. Field work, workshops and practical skills in regional and spatial analysis. Will be taught in Winter Session.

AUST2024

Power & Policy in Australian Politics

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: POLS2008

Examines Australian public policies in the context of contemporary theories and techniques of policy analysis. Considers the problems of government administration and decision-making in the modern state. Examines the role of the state and the impact of economic rationalism and managerialism. Focuses on a range of policy issues and areas including: economic policy, social policy, industrial relations and industry policy, the environment, Indigenous affairs, immigration and women's policy. Encourages specialisation in specific policy areas, drawing on relevant analytical frameworks to produce policy briefs and case studies.

AUST2026

Music of Aboriginal Australians

School of Music and Music Education

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT0501, all MUSC and MUSI courses

A study of traditional and contemporary Aboriginal music in its social, historical and cultural contexts.

AUST2027

Staging Australia

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: MEFT2300, THST2163

Broadly-based study of the rise of Australian theatre since the 1960s, with the focus on recent performance. The emphasis is on wide theatrical movements, including the larrikin theatre of the 1970s, alternative/community theatre; Aboriginal theatre; women's and multicultural performance; and current trends in playwriting and contemporary performance.

AUST2028

Australian Cinema & Television

Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: FILM2002, MEFT2201

Traces the emergence and significance of Australian screen cultures. Studies the development of the Australian film industry, including analysis of the economic, social and political factors and the myths which have shaped the industry. Studies the role of television in shaping the experience of modern Australia and its place in the world. Looks at a number of non-mainstream forms of audio-visual production in Australia.

AUST2029

Cities: Experiencing Sydney

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA2106, SOCC2703

Focuses on experiences and representations of cities. It is concerned with how the city has become the archetypal site and sign of modernity, and with how spatiality is now central to how cities are lived and imagined. Looks at the city as the site of social transformation in the twentieth century and the tensions between order and disorder. Explores images of the city as the site of liberal and radical utopian dreams as well as the promise and disaster of cities. The changing landscapes of the city are investigated through examples such as streets, crowds, light/darkness, gardens, museums and shopping malls.

AUST2030

Approaches to Australian Art

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SAHT1213, SAHT2214

Introduces some of the preoccupations of Australian Art in the years since colonisation. Issues include: the notion of the artist as a recorder in the 19th century and a tourist in the 20th; the search for a 'Great' Australian artist; national identity and art; links between art and commerce; the idea of 'modern' in an Australian context; and attempts to place Australian art in an international context.

AUST2031

Transport, Land Use & Environment

School of English

UOC6 HPW6

Prerequisite: 36 units of credit; Excluded: GEOG2071, GEOG3181, GEOG3671, GEOH3671

Introduction to the complex interactions between transport, land use and the environment in urban areas. Special focus on the long term environmental consequence of transport decisions. Introduction to the various methods used to analyse and predict the consequences of policy changes. Australian cities as case studies.

AUST2032

Environmental Impact Assessment

School of English

UOC6 HPW4

Prerequisite: 36 units of credit; Excluded: GEOG3911, GEOH3911

History and legislative framework. State and Commonwealth guidelines for environmental impact assessment (EIA). Impact evaluation in terms of environmental and socio-economic criteria. Case studies of environmental impact studies (EIS). Procedures, techniques and issues. Future directions in EIA.

AUST3103**Urban Legends: The History of Sydney**

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2022, HIST2100, HIST3103

Explores Sydney's dramatic transformation from a tiny preindustrial penal settlement to a sprawling city of over four million people by examining the interplay of natural, cultural and spatial histories in the broader context of urban history and historiography. Themes include Sydney's environmental, Aboriginal, immigrant and gendered histories, 'slums' and suburbs, communities and sub-cultures, heritage and modernity, sex and food, the creation and impact of urban images.

AUST4500**Combined Australian Studies Honours (Research) Full-Time**

School of English

UOC12 HPW2

Prerequisite: 48 units of credit in AUST approved courses with an average of 65%, including AUST2004 or AUST2005

Students must complete a seminar course chosen in consultation with the Coordinator of Australian Studies, a seminar in the students major discipline and a thesis of 15,000 to 20,000 words supervised jointly between the Australian Studies program and the chosen discipline.

AUST4550**Combined Australian Studies Honours (Research) Part-Time**

School of English

UOC6 HPW2

Prerequisite: 48 units of credit in AUST approved courses with an average of 65%, including AUST2004 or AUST2005

Students must complete a seminar course chosen in consultation with the Coordinator of Australian Studies, a seminar in the student's major discipline and a thesis of 15,000 to 20,000 words supervised jointly between the Australian Studies program and the chosen discipline.

AVEN1310**Basic Mechanics**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

The course explains the basic concepts in statics and strength of materials including Newton's Laws, SI system of units, two dimensional force systems, moments and couples, equilibrium in two dimensions, stress, strain, stiffness and flexibility, analysis of bars, bending stress and measurement of strain, material properties, theories of failure and composite materials.

AVEN1910**Introduction to Aircraft Engineering**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

An explanation of how aircraft fly and how engineering technologies relate to the vehicle. Concepts and nomenclature relating to flight vehicles and the significance of aircraft configurations and flight systems.

AVEN2220**Aviation Engineering Experimentation 1**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Exposure to the practical skills associated with aircraft maintenance conducted at the Aeroskills Centre at Padstow College of TAFE. Introduction to a workshop environment and practices including health and safety aspects. Development of respect for the skills of aircraft maintenance craftsmen.

AVEN2910**Aviation Technologies 1**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Aviation Systems - Mass transfer, power transfer and information transfer fluid systems. Electrical power generation, management and distribution.

Environmental control systems, requirements and operation. Avionics - Avionics systems, classification and applications. Flight instruments and controls. Computer aided flight management.

AVEN2920**Aviation Technologies 2**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Aircraft Propulsion - Elements of internal -combustion (piston) engine cycles, performance and operations, piston engine fuel systems, performance augmentation and engine condition monitoring, elements of propellers, basic propeller thrust equations, variable pitch propellers. Aircraft Performance - Flight environment, aircraft classifications, operational requirements, range, accelerated and unaccelerated flight manoeuvring and flight envelopes, energy height, power and wing loading.

AVEN2930**Aviation Technologies 3**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Aerodynamics - Introduction to basic aerodynamics of lift and drag. Dimensional analysis to relate wind tunnel results to actual flight tests. Bernoulli's equation. Indicated and corrected airspeed. Airframe Analysis and Maintenance - Aircraft structural layout, configuration of wing and fuselage structures. Bending, shear and torsional stiffness. Materials selection. Elements of aeroelasticity including control reversal. Structural failure modes.

AVEN3220**Aviation Engineering Experimentation 2**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

A selection of experiments from airframe analysis, flight mechanics, aircraft propulsion, aircraft systems and aerodynamics. Experiments will make use of the wind-tunnels, systems laboratories, engines laboratories and structural testing facilities in the Engineering Faculty.

AVEN3230**Aviation Systems and Avionics**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Typical aircraft systems operation and management. Multiplexing and systems degradation. Communications, internal and external. Fly-by-wire control systems. Aircraft state sensors, air data sensors and inertial sensors. Radio and dead reckoning navigation systems. External world sensor systems. Engine control and management systems.

AVEN3420**Aircraft Maintenance**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Development of a maintenance program for aircraft. Introduction to fatigue, corrosion and wear. Maintenance technologies and maintenance management. Condition monitoring. Reliability centred maintenance. Examples from airframe, powerplant and systems maintenance.

AVEN3610**Aerodynamics, Stability and Control**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Drag of an Aircraft - Techniques and devices to reduce drag. Airfoil characteristics at low Reynolds number. Lift and drag at high Mach number. Effect of supercooled cloud, drizzle, rain and icing on airfoil performance. Stability - longitudinal and lateral static and dynamic stability, stability and manoeuvre margins, aircraft loading strategies, reduced stability aircraft. Control-trimmed flight, aircraft response to control input, limits of controllability.

AVEN3710**Aircraft Propulsion**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Revision of piston engines and propellers. Propeller noise, stall, gyroscopic effects and slipstreams. Elements of gas turbine engines, gas turbine engine classification, gas turbine engine cycles, performance and operation, high altitude operating characteristics. Gas turbine engine condition monitoring, surge, engine re-starting.

AVEN3930**Aircraft Evaluation and Design Appraisal**

School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Evaluation of fitness for purpose, route matching, range load graphs, environmental constraints, indirect and direct and operating costs, maintenance requirements, fleet capacity, crew requirements, safety and reliability.

AVIA1002**Flying Training 1**

Department of Aviation
UOC12 HPW8
Excluded: AVIA1000

Ground training and associated theory for Stage 1 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Private Pilot Licence (PPL) including pre-command theory, basic aeronautical knowledge, PPL theory and an introduction to Commercial Pilot Licence theory. This course encompasses ground training phases 1, 2, 3, 4 and 5 as detailed in the UNSW Manual of Flight Training, and the Civil Aviation Safety Authority's Day VFR syllabus (Aeroplane). Practical flight training to PPL is a highly recommended adjunct to this course.

Note: Restricted to Program 3980 Flying Stream.

AVIA1321**Fundamentals of Aviation**

Department of Aviation
UOC6 HPW4
Excluded: AVIA1300

The course provides a foundation for the range of courses provided in the BAv, and includes a general description of the aviation industry.

Topics are chosen from the main organisations and the regulatory environment: introductory aviation economics and management practices for airlines and airports; basic aeronautical knowledge including aircraft performance, operation and navigation; international and organisational cultures; human factors; aviation safety.

This course is taught in an interactive context, developing library research skills and written, oral and presentation communication skills.

AVIA1700**Aviation Safety Management 1**

Department of Aviation
UOC3 HPW2
Excluded: AVIA2700, PROF2001

This course covers the use of quick access recorders for fleet performance monitoring, corporate structures for safety departments and accident/incident analysis. Safety auditing, emergency planning and in-flight security will also be studied.

AVIA1810**Aviation Security**

Department of Aviation
UOC3 HPW2
Excluded: AVIA3703, AVIA3810

Misbehaviour, crime and terrorism provide a range of threats to aviation operations. This course covers the essential topics of threat assessment and management of those risks associated with the threats. Other topics include Regulatory responsibilities of sovereign states and the International Civil Aviation Organisation, and their impact on the practice of security in the various aviation sectors, including ground and air operations.

AVIA1850**Airport Management 1**

Department of Aviation
UOC3 HPW4

This course provides an introduction to issues concerning management of an airport, including definitions of an airport's functions and facilities, describing the overall regulatory requirements, managing the airport as a business, managing the operations, both landside and airside, managing the development of an airport and consideration of community relations.

AVIA1900**Aviation Economics**

Department of Aviation
UOC3 HPW4
Excluded: PROF0203

This course covers the economics of an airline and how the management of economic problems are analysed. Demand analysis and its relation with price and economic conditions covers revenue issues. Costs and supply are studied with reference to available airline costing information. The interaction of demand and supply are then studied and how airlines manage this aspect.

AVIA2003**Flying Training 2**

Department of Aviation
UOC18 HPW12
Prerequisite: AVIA1002; Excluded: AVIA2000.

Ground training and associated theory for Stage 2 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Commercial Pilot Licence (CPL), Night Visual rating (NVFR) and multi-engine endorsement. This course encompasses ground training phases 6, 7 and 8 as detailed in the UNSW Manual of Flight Training, and the Civil Aviation Safety Authority's Day VFR syllabus (Aeroplane), and Civil Aviation Regulations. Practical flight training to CPL with NVFR and multi-engine endorsement are highly recommended adjuncts to this course.

Note: Restricted to Program 3980 Flying Stream.

AVIA2110**Aviation Human Factors 1**

Department of Aviation
UOC3 HPW2
Excluded: AVIA1100, PROF0102

This course deals with the effective use of all resources in the aviation decision making process with focus on the mechanism of communication within the hierarchy of the cockpit and the cabin. Evaluation of communication will focus on the impact of modern technology, changes in methods of communication, and the reduction in crew numbers.

AVIA2210**Aviation Human Factors 2**

Department of Aviation
UOC3 HPW2
Prerequisite: AVIA1100 or AVIA2110 or AVIA2003 Excluded: AVIA2100

The interrelationships between Captain and crew will be used to illustrate the principle of the hierarchy of command. Effective teamwork will be developed through negotiation of the principles of communications and effective decision management. This course will build on the principles illustrated in Aviation Human Factors 1.

AVIA2400**Aviation Regulations 1**

Department of Aviation
UOC3 HPW2
Excluded: AVIA2403

Aviation Regulations 1 introduces the Laws and regulations under which an aviation operation functions. Beginning with regulatory authority and source, this course develops an understanding and awareness of both the direct operational aspects of regulations and the commercial considerations that they demand. The emphasis is that of routine implications of the Civil Aviation Act, Civil Aviation regulations and orders.

AVIA2500**Airline Marketing**

Department of Aviation
UOC3 HPW2

This course uses the classic approach to marketing management strategies but is mostly entirely focussed on how this is achieved in the industry. The approach is of a practical nature. The course studies airline market research, marketing strategy development, product development, pricing strategies and yield management, distribution and promotion strategies. The course encourages and emphasises current airline marketing behaviour as examples of the theory.

AVIA2700**Aviation Safety Management 1**

Department of Aviation
UOC3 HPW2
Excluded: PROF2001

Topics covered include the use of quick access recorders for fleet performance monitoring, corporate structures for safety departments and accident/incident analysis. Safety auditing, emergency planning and in-flight security will be studied.

AVIA2800**Management of General Aviation**

Department of Aviation
UOC3 HPW2

This course covers a broad range of the management decisions faced by the airlines. This course introduces the aviation environment within which the airline management functions and makes economic decisions. Revenue issues are studied with demand analysis, and an airline's ability to manage price and to predict loads. The key elements of supply and cost are analysed by reference to available airline data. The final aspect studied is the combination of the demand and supply issues.

AVIA3004**Advanced Flying Training**

Department of Aviation
UOC24 HPW16

Prerequisite: AVIA2003; Excluded: AVIA3000.

Ground training and associated theory for Stage 3 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Command Instrument Rating (CIR), Grade 3 Instructor Rating (QFI), an Air Transport Pilot Licence (ATPL), and multi-crew operations. This course encompasses ground training phases 9, 10, 11 and 12 as detailed in the UNSW Manual of Flight Training, and Civil Aviation Safety Authority's ATPL syllabus (Aeroplane). Practical flight training for CIR and QFI is a highly recommended adjunct to this course; students may also select from options of airline entry training or advanced aircraft endorsement in place of the QFI rating..

Note: Restricted to Program 3980 Flying Stream.

AVIA3101**Airline Management**

Department of Aviation
UOC6 HPW4

Prerequisite: AVIA1900, AVIA2003 or AVIA2400; Excluded: AVIA3002.

This course considers the main facets of corporate airline management, and begins with airline organisational practice, management's visions and objective setting. It proceeds with the main corporate processes of business planning, schedule planning, fleet planning and external relationships such as outsourcing. Financial aspects and global alliance matters are introduced.

AVIA3201**Airline Resource Management**

Department of Aviation
UOC6 HPW4

Prerequisite: AVIA3101; Excluded: AVIA3002.

This course follows AVIA3101 and introduces management of airline activities at an operational level. Issues include engineering and maintenance, crew planning and scheduling, airport planning for airlines, operations control issues, emergency procedure management, and freight and punctuality management.

AVIA3300**Air Traffic Management**

Department of Aviation
UOC3 HPW2

Excluded: AVIA1150, AVIA1103

This course is concerned with the history, development and practical application of Air Traffic Services and their relationship to the commercial and regulatory aspects of commercial aviation. The topics are focussed on both operational and administrative structures within the industry. Emphasis is placed on the role of ATS from the perspective of a service provider. Topics include ATC history, structure, legal aspects and implications. Other significant aspects include communications, safety, noise abatement and the development of future systems.

AVIA3400**Aviation Regulations 2**

Department of Aviation
UOC3 HPW2

Prerequisite: AVIA2400; Excluded: AVIA2413.

Aviation Regulations 2 builds on the fundamental concepts introduced in Aviation Regulations 1. The emphasis of this course is the legal ramification for pilots and operations managers imposed by the Civil Aviation Act and associated regulations. Specific case studies will form a large part of this course.

AVIA3600**Simulations Applications**

Department of Aviation
UOC3 HPW2

Excluded: AVIA2603

This course addresses the broad application of simulation to the aviation industry. While the emphasis will be on aircraft simulations, aspects of operations systems simulations will also be covered. The perspective of this course will be that of end user application, particularly from management and training of human resource basis.

AVIA3710**Aviation Safety Management 2**

Department of Aviation
UOC6 HPW4

Excluded: PROF3001, AVIA3700.

The course develops the knowledge of aviation safety, which has been gained by students in both Aviation Safety Management 1, and Aviation Human Factors lectures. It will emphasise the development of analytical research skills for the investigation of aviation safety occurrences and problems. The course will cover the development of research and report writing skills in the context of air transport safety, and contemporary aviation safety issues with specific reference to technical, human and organisational factors. Each student will be required to undertake a structured, supervised research project on an aviation safety issue to be agreed with the lecturer-in-charge.

AVIA3800**Management of Regional Airlines**

Department of Aviation
UOC3 HPW2

A further development to AVIA2800, this course will provide students with the information pertinent to business and corporate operations with the regional airlines sectors of the industry. Aspects covered include requirements for low capacity airlines AOCs and current state and national requirements for such operations.

AVIA3851**Airport Management 2**

Department of Aviation
UOC6 HPW4

Prerequisite: AVIA1850

This course follows AVIA1850 and provides an in-depth coverage of the key elements outlined in Airport Management 1. Issues include the regulatory environment, including licensing and obligations, an evaluation of various ownership models, the economics of running the airport as a business, including costs, revenues, subsidies and performance indicators, client relations and services, and general airport administration. Airside operations include practical operational requirements as well as necessary documentation. Other planning issues include managing terminal and landside operations, emergency and crisis management, infrastructure development, socio-economic impacts on the community, and environmental impacts.

AVIA4001**Aviation Honours - Full Time**

Department of Aviation
UOC24

This course introduces students to major research areas through a course of advanced lectures and a major research thesis of 20,000 words. Through the taught component of this course, students will critically examine academic and industry developments within aviation with particular emphasis towards the chosen area of their thesis. The research thesis will examine an area of research significance as approved by the Head of Department.

AVIA4002**Aviation Honours - Part Time**

Department of Aviation
UOC48

Undertaken over two years, this course introduces students to major research areas through a course of advanced lectures and a major research thesis of 20,000 words. Through the taught component of this course, students will critically examine academic and industry developments within aviation with particular emphasis towards the chosen area of their thesis. The research thesis will examine an area of research significance as approved by the Head of School.

BEES0005**BEES Internship Study Abroad Program**

School of Biological, Earth and Environmental Sciences
UOC6

Note: Individually designed project course available only to overseas students

BEES0006**Special Program in Biological, Earth and Environmental Sciences - Undergraduate 6 units of credit**

School of Biological, Earth and Environmental Sciences
UOC6

Note: Individually designed project course generally available only to overseas students.

BEES0007**Special Program in BEES 12uoc**

School of Biological, Earth and Environmental Sciences
UOC12

Note: Individually designed project courses generally available only to overseas students.

BEES0008**Special Program UG in BEES 18uoc**

School of Biological, Earth and Environmental Sciences
UOC18

Note: Individually designed project courses generally available only to overseas students.

BEES2041**Data Analysis for Life and Earth Sciences**

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Excluded: BIOS2041, SLSP2001, GEOG2101, MATH2801, MATH2829, MATH2831, MATH2839, MATH2841, MATH2859, MATH2899, MATH2901, MATH2931, ECON2241

Development of skills in applying statistics to biological, earth and spatial data; design and analysis of experiments in life and earth sciences; sampling strategies for estimating sample size; analysis of community and environment structure using multivariate statistics; simulation modelling in population biology, and statistical fitting of non-linear models to population growth data; correlation and both simple and multiple regression; improving statistical models using analysis of residuals; analysis of spatial data.

Examples are drawn from ecological, geographical, earth, behavioural, genetic, microbial and immunological data. Practical work emphasises problem-solving and hands-on experience with EXCEL, MINITAB and other specialist software.

Assumed Knowledge: MATH1041

BEES4511**Professional Skills**

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

The course provides training in skills needed for the Honours project and any subsequent degree as well as in outside employment. Principal topics covered include occupation health and safety, presentation skills (written, oral and audiovisual including computer-aided presentations), professional ethics and issues of scientific fraud, database and library usage, information retrieval, overview of quantitative skills, as well as more specific research or professional skills which may be tailored to particular interest groups.

Note: Available to students enrolled in an Honours program offered by the School of BEES, and other Honours students as approved by the Honours Coordinator.

BEES4521**Literature Review**

School of Biological, Earth and Environmental Sciences
UOC6

Literature research and its presentation in review format covering a defined disciplinary area in either biology, ecology, botany, zoology, physical geography, geology or environmental science. The course is taken in conjunction with an Honours research project in the School. The topic area is decided in consultation with an Honours supervisor and is related to the topic area of the research project.

Note: Available to students enrolled in an Honours program offered by the School of Biological, Earth and Environmental Sciences, and other Honours students as approved by the Honours Coordinator.

BENV1042**World Wide Web in Presentation and Communication**

Architecture Program

UOC6 HPW3

Prerequisite: BENV1141.

Web Page: <http://www.fbe.unsw.edu.au/courses/benv/1042/>

Introduction to the theory and practice of World Wide Web based multimedia and other computer technologies relating to the presentation of designs and/or other information. Assessment will be through the development of a series of Web pages.

BENV1043**Multimedia in Design Presentation**

Architecture Program

UOC6 HPW3

This course explores the use of an industry-standard multimedia authoring tool to develop design presentations. Students will develop skills in the integration of media objects including: edited scanned images, rendered images (produced using CAD technology), line drawings, animations (produced using CAD), video (captured off VHS) and sound. Students will be expected to apply these skills in a preliminary learning task and then in the production of one major design presentation.

BENV1072**Design for Energy Efficiency**

Architecture Program

UOC6 HPW3

This course develops an understanding of solar efficient architecture and builds on this to develop skills in energy performance simulation. House energy performance rating is fast becoming an essential requirement for building applications and this requires specific skills. It targets core areas of efficiency in space heating and cooling and lighting design. Material is presented as lectures and seminars, supplemented with readings.

BENV1073**Sustainable Design and Practice**

Faculty of the Built Environment

UOC6 HPW3

Prerequisite: ARCH1371

This course will assist in laying a basic foundation of knowledge for using 'sustainable design' assessment tools and rating schemes to inform the building design process. The course will also enable students to engage in self-directed studies such as research and continuing development of professional careers. The course will introduce the Australian rating schemes "GREENSTAR" and "BASIX" as sustainable design aids. By the end of the course the students will have become familiar with the use of these two Australian assessment tools in design.

BENV1074**Conceptual Structural Design**

Architecture Program

UOC6 HPW3

Prerequisite: ARCH1371

Conceptual structural design of wide-span single storey structures. Conceptual design process selectively applied to bridges, halls for assembly, industry, exhibition and sports. Emphasis on complex lightweight systems - including surface, spatial and hybrid structures with cables, membranes, grid shells and transparent enclosures. Integration of constructional and structural issues related to design, manufacture and building processes. Material is presented as lectures and seminars, supplemented with readings in architectural history and theory.

BENV1075**Structural Systems: Advanced**

Architecture Program

UOC6 HPW3

Prerequisite: ARCH1371

This course builds on prerequisite courses by considering in more detail the conception, analysis, design, and construction of more sophisticated structural systems, like shells and grid shells, space frames, cables, membranes, tall buildings and towers, prestressed structures, as well as more refined aspects of conventional material, systems and loading environments. It also considers the wider question of the role of structural

engineering in architecture and its integration with other engineering disciplines, mainly through case studies. Material is presented as lectures and seminars, supplemented with readings in architectural history and theory.

BENV1101

Design Fundamentals: Studio 1

Faculty of the Built Environment

UOC8 HPW7

Introduction to design as fundamental to coherent thought and action in your discipline. Exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental precedent studies. Critical thinking and expression in different forms. Studio projects and assignments to develop skills and understanding of design elements and principles. Introduction to a basic vocabulary of representation techniques used by designers to facilitate the development and communication of design ideas including: colour, freehand drawing, sketching, painting, construction, mixed media, desktop publishing, photomontage techniques, technical drawing and drafting.

Note: BArch and BScArch students must take this course concurrently with ARCH1121, BENV1141 and ARCH1171.

BENV1141

Computers and Information Technology

Faculty of the Built Environment

UOC3 HPW3

An introduction to the technology of computing and information technology as it pertains to the disciplines of the built environment. The computer is presented as a tool for storing and manipulating information by means of application programs which model the real world needs and activities of professionals in these disciplines. Topics include basic operation of a computer, information handling, networks and communications, computer graphics, CAD technology and computational processes. Students engage in weekly hands-on computer exercises to provide knowledge and experience in the use of applications commonly used in their own discipline. Assessment is based on participation in the hands-on work, some written assignments and tests.

BENV1242

Computer-Aided Design

Faculty of the Built Environment

UOC3 HPW3

Pre-requisite: BENV1141 or SOLA1050 or INTA2141

An exploration of the variety of CAD and graphic tools available for modelling, understanding and presenting design proposals. This course has dual objectives to build skills and confidence in the operation of CAD and related graphic systems, while developing a deep understanding of the unique opportunities offered by computer-based modelling technologies. Applications explored include 2D and 3D CAD, simple visualisation, image editing and composition, and the crossovers possible between these various techniques. Conceptual modelling techniques and their relevance to the design disciplines will be discussed. Weekly one-hour lectures are supported by discipline-focussed laboratory classes where students gain hands-on experience in the use of a variety graphic applications. Assessment is based on satisfactory participation and the completion of staged CAD-based tasks.

BENV1341

Design Modelling and Visualisation

Faculty of the Built Environment

UOC3 HPW3

An exploration of computer graphic techniques for visualising design proposals. Information can be found on the Internet Web Page: <http://www.fbe.unsw.edu.au/courses/benv/1341/> The lectures cover the principles and techniques of 3D visualisation including lighting, reflection, transparency, surface shading, texture mapping and depth cues. Laboratory-based exercises explore these different techniques, along with a variety of presentation techniques such as rendered images, image editing, animation, Quicktime VR and VRML. Assessment is based on the earlier staged learning exercises and one major design presentation project.

BENV1382

Social Responsibility and Professional Ethics

Building Construction Management Program

UOC3 HPW2

Issues of social responsibility and professional ethics explored via the analysis of case studies, seminars, discussion and debate.

BENV2101

Adaptive Re-Use

Interior Architecture Program

UOC3 HPW2

An examination of the trend to find new uses for existing buildings rather than demolish and rebuild. Issues of conservation, preservation and heritage value of buildings; the role of other interested parties (media, community groups) in determining options for re-use. The course will address such issues as: surveying and assessing buildings for their suitability for adaptive re-use; measuring adaptive re-use in terms of environmentally sustainable design (ESD); assessing building forms and finding suitable compatible new functions; working within the Burra Charter; building conservation techniques; writing a "Heritage Conservation Report". Case studies selected from recent local examples of adaptive re-use. A design exercise involving adaptive re-use.

BENV2106

Landscape Design 9: Integrated Studio

Landscape Architecture Program

UOC6 HPW6

Prerequisite: LAND1302

Mixed studio groups are formed from different years and disciplines. The studio concentrates on significant current issues with an emphasis on design competitions. The studio runs for the first seven weeks of session only.

BENV2107

Landscape Design 10: Elective Studio

Landscape Architecture Program

UOC9 HPW6

Prerequisite: LAND1302 or ARCH1202 or IDES2162

Investigation of the relationship between design and contemporary landscape theory through a series of critical design projects at site planning scale. After the first half of the session, students in programs other than landscape architecture choose to complete this course by joining either LAND1201 or LAND1301.

BENV2112

Landscape Design for Well Being

Landscape Architecture Program

UOC6

This course will explore restorative and therapeutic landscapes for a variety of settings and client groups, eg hospitals, hospices and special care facilities. A design project for a specific site and client will be carried out following lectures and site visits with visiting practitioners.

BENV2117

Visual Resource Analysis & Management

Landscape Architecture Program

UOC3

Understanding the issues related to visual or scenic quality to develop a means to assign them value in the planning and design process. This elective course will be taught in an intensive five-day format combining lectures, discussions, presentations of case studies and site visits with practical exercises. Topics to be covered will include: the aesthetic experience of landscape, inventory and assessment of visual resources aesthetic consideration in the planning/design process, theoretical foundations in visual resource management and visualisation techniques.

BENV2122

Modelling Sustainable Design

Faculty of the Built Environment

UOC6 HPW3

The degree to which a building is 'sustainable' is the subject of much debate. This course contributes to understanding how to best approach issues of sustainability in architectural design. One approach is to set a range of agreed ecological indicators and to assess the design against these and other similar buildings. Conducting such an assessment is increasingly being demanded of architects by local, state and national regulatory authorities and clients prior to development approval and construction. Architects are required to provide an accurate and quantifiable assessment of the environmental credentials of their design proposals. This assessment should be inclusive of the aesthetic intentions of the design without resorting to generic ESD solutions. This course is concerned with exploring opportunities provided by the environmentally sustainable credentials of a design proposal to generate architectural ideas that inform design thinking and practices. This course will allow

students to assess a previous studio design proposal in terms of thermal performance, energy used in manufacturing of materials, the ability of the building to be self sufficient for its resource requirements and waste reduction. Design assessment will be conducted using spreadsheets, the Ecotect simulation program, Airpak, Radiance and/or LCAid, life cycle assessment software. Interaction between the design modifications made as a result of the assessment process and the original design will be explored and documented using CAD. Course material will be presented as lectures (in the computing lab) and on line technical tutorials. Students are expected to undertake the tutorials independently so that allocated lab hours can be used effectively. There will be 3 assessment tasks requiring students to undertake individual and groupwork. This course is open to Architecture students who wish to explore the nexus between environmental sustainability and informed architectural design.

BENV2125

Photovoltaics in the Built Environment

Architecture Program
UOC6 HPW3

The use of PV as an integral part of a building structure is one of the fastest growing PV markets world-wide. This course will examine the architectural and engineering aspects of using PV as a building material. It will include building performance requisites, active and passive solar design principles, planning requirements, co-ordination between electrical and building trades, system maintenance and monitoring. In particular, the course will cover techniques for integration of PV in design (shape, size, orientation, colour), mechanical systems (especially multi-functional elements), electrical systems (grid connection and /or direct use) and building operation, control and maintenance. Students will receive practical experience through field trips and laboratory experiments. The course is run jointly with the Photovoltaics Research Centre.

BENV2133

Design Collaboration using a Building Information Model

Architecture Program
UOC6

This course provides a unique opportunity to participate in a multidisciplinary collaborative architectural design programme with students from a range of disciplines including architects, engineers, interior architects, builders, planners and landscape architects. The course will engage with three major learning contexts: the process of design resolution and refinement, commencing with a real concept design (a building that is at an advanced stage of design on a real site in Sydney) and working through a teamwork process to arrive at a set of well resolved design propositions; participation in a genuine collaborative design process, working as part of a multidisciplinary design team and gaining insights into the way other design professionals work; the use of a shared server-based building information model with a corresponding set of design simulation tools. An international expert in the development and use of shared building modelling technology will lead the studio, supported by a local design professional who will guide the design resolution process. Students work as part of a small multidisciplinary design team, each having equal input to the design process, but responsible for bringing to the table their own area of expertise. There will be regular reviews where guest critics will visit the studio with particular expertise to guide the deliberations of each team. The course is run in a studio format with weekly lectures and associated seminars, critique sessions and group workshops. Assessment is based on both individual and group projects, including a group design presentation at the end of the semester.

BENV2201

Twentieth-century Australian Architecture

Architecture Program
UOC3 HPW2

Detailed study of the theories and work of selected Australian architects. Issues of nationality and nationalism will be addressed as well as those of criticism in the architectural presses. Readings will be selected related to various twentieth century architects. They will include works of criticism as well as explanatory texts. One architect will be studied each week and readings will address one particular issue relevant to the architect's theoretical position. Material is presented as lectures or seminars.

BENV2203

Introduction to 20th - century Japanese Architecture

Architecture Program
UOC6 HPW3

The course examines a cross-section of significant movements and practitioners in contemporary Japanese architecture. Material is considered

from the point of view of "interaction", and the cross-fertilization which takes place in a global setting. The intention of the course is to present this material from a Japanese critical perspective with an eye to gaining an understanding of different modes of cross-cultural encounter. The course offers an introduction to relevant and contemporary work, and promotes critical engagement with the implications of globalization and difference. Architects studied include Ando, Sejima, Yamamoto, Takasaki, Takamatsu and others. Material is presented as electronic seminars.

BENV2204

Architecture and Consumer Society

Architecture Program
UOC6 HPW3

In this course students will study the interaction between architecture and consumer society. The main focus will be on how the ethos of consumerism relates to the design of urban spaces, cities and the buildings within them. Consumerism will be examined not only in terms of shopping, but also as a way of relating to culture and cultural education. We will consider the explosion of "themed" environments over the last thirty years, from shopping malls to whole cities such as Las Vegas. Themed environments are usually designed to stimulate consumer spending by amalgamating spaces for retail activity with those of entertainment and amusement. By drawing on the work of cultural and architectural theorists, as well as site visits to places within Sydney, the subject will examine three types of consumer-orientated space: shopping malls, casinos and new 'interactive' museums. Students will be encouraged to develop critical attitudes toward the influences consumerism has on contemporary architecture. Material will be presented in lectures and seminars.

BENV2205

Classical Architecture

Architecture Program
UOC3 HPW2

Exploring the origins, vocabulary and grammar of the Classical Orders and their application in Greek and Roman architecture, in the Renaissance and the Baroque periods, through Academism and Neo-Classicism to the resurgence of Classical ideals in the twentieth century. Material is presented in both lecture and seminar format.

BENV2206

Theory of Form

Architecture Program
UOC3 HPW2

The ontological basis and the antinomial qualities of form in the causal sense, reflected in nature, art and architecture. Practical investigation of the antinomial qualities of form with special emphasis on the brief and on the built fabric of contemporary architecture, and practical; attempts to identify shortcomings and develop corrective measures. Material is presented mainly as two-hour lectures and occasional tutorials comprising practical projects focusing on selected case studies.

BENV2208

Spirit in Architecture

Architecture Program
UOC3 HPW2

Spatial symbolism and intellectual intuition, principles, and methods of sacred architecture. Spiritual doctrine reflected in the layout of Judaeo-Christian architecture with reference to the architecture of sacred traditions. Material is presented mainly as two-hour lectures with occasional tutorials comprising practical projects focusing on selected case studies.

BENV2212

Architecture and Culture

Architecture Program
UOC6 HPW3
Prerequisite: ARCH1221.

Many architects and architectural theorists today are engaged in a critical questioning of widely held yet inadequate beliefs and processes, including unrestrained progress, instrumental reason and social control. These driving social forces have brought about a devaluing of human work and nature that courts ecological disaster and a degrading of our physical environment. Architects may formulate a resistance through careful reflection on: the role of the human faculties of imagination and memory in design and construction; the significance of decorum, of public and private realms and of boundaries in our buildings and cities; and the limits of the architectural profession's intrusion into all dimensions of life.

The course will focus on several cultural critics, both writers and architects, assessing the value and limitation of their contributions. Investigation will be guided by a vigorous tradition of thought (extending through the nineteenth century to the present) which has defined the word 'culture' as an idea of a whole way of life (and conflict) for individuals in a community. This is formulated as a challenge to the dominant values of society. Material is presented as two-hour lectures.

BENV2213**Critical Perspectives on Twentieth Century Art and Design**

Architecture Program

UOC3 HPW2

This course introduces some of the key interpretive strategies used in art history and cultural studies over the last hundred years, with an emphasis on current lively debates. The classes will explore and question some of the layers of interpretation of artists' works from the time they were made to the present. European, North American and Australian art and design will be examined through various filters such as modernism, post modernism, internationalism, nationalism, regionalism, gender and identity. In visual and cultural studies there is no single correct interpretation of a particular artwork or movement. This course has been designed to enable you to become aware of the plurality of interpretations and to appreciate if not always to endorse or adopt the arguments for contesting interpretations of objects and events. Material is presented as two-hour lectures. Assessment will include individual and group work.

BENV2214**History, Theory and Interpretation: Art and Architecture**

Architecture Program

UOC6 HPW3

This course aims to deepen an understanding of basic theoretical concepts in the history of art and design; to gain familiarity with some key writings by artists, art historians and art critics; to develop strategies for evaluating theoretical arguments against appropriate visual works; and to develop competence and confidence in evaluating works of art/design and interpretive strategies developed for our understanding of them. Key concepts to be investigated are: style, connoisseurship, formalism, iconography, sociological perspectives, semiotics, gender, sexuality, cultural studies, modernity and post modernity. The course has been developed around a seminar structure which will encourage students to learn through looking, reading, thinking, and informed arguing. All students will be required to purchase a reader. Material is presented as a mix of lectures and occasional tutorials.

BENV2216**Interior Theory**

Interior Architecture Program

UOC6 HPW3

A detailed exploration of the way we experience space. A study of how and to what extent this experience may be modified manipulated and determined by the application of various spatial, surface and lighting devices. The psychological implications of a range of different ways of designing interior space. Language of line; balance, visual weight, placement of objects; focal points; scale, shape and proportion. A series of lectures and studies/projects using drawings and simple models.

BENV2217**Contemporary Interior Design**

Interior Architecture Program

UOC6 HPW3

A review of the history of interior design concentrating upon the period since the second world war. The course will draw upon significant practitioners to highlight trends in design. Students will be asked to select case studies to research the theoretical basis for design. Aspects to be discussed include the evolving nature of the relationship between interior designers and other design fields. Relationship between interior architecture and the media.

BENV2218**The Vernacular Landscape**

Landscape Architecture Program

UOC3 HPW2

This course critically examines everyday landscapes of the modern world, with an emphasis on the Australian vernacular landscape. Contemporary theories of place and landscape as text are reviewed. Students are introduced to the theory and practice of cultural landscape assessment and their skills in landscape documentation, critical analysis and essay writing are extended.

BENV2219**History of Australian Landscape Architecture**

Landscape Architecture Program

UOC3 HPW2

The history of landscape architecture and garden art in Australia since European settlement is reviewed. Students develop a knowledge of planting design traditions in Australia. The history of plant introductions is analysed and the design qualities of Australian plants as the fundamental elements of landscape architectural expression in Australia. The inter-relationships between Australian landscape architecture, Australian architecture and the urban design of Australian cities are studied. Students are introduced to the theory and practice of heritage conservation for gardens, public parks and public spaces. Skills in historical, essay and report writing are extended.

BENV2220**The Culture of Nature**

Landscape Architecture Program

UOC3 HPW2

This course traces the myriad perceptions of nature in the history of western civilization, and provides an understanding of the evolution of ecological thought. Readings and lectures explore the ways in which aspects of culture foster ideas about "Nature". Particular attention is given to representation of ideas toward Nature in the arts and the built environment. The intent is to provide students in landscape architecture and related disciplines with a framework for understanding and articulating the complex relationship between nature and culture, and a foundation for integrating this understanding into their own work as designers. Skills in critical thinking, essay writing and discussion are extended and evaluated. The course is based on a cross-disciplinary approach and considers a wide range of perspectives on the topic.

BENV2221**State of the Art: Contemporary Landscape Design**

Landscape Architecture Program

UOC3 HPW2

To develop knowledge in depth of contemporary landscape design through a detailed review of current projects, built works and writings. Students will investigate and test current theories of design in landscape architecture, through the critical analysis of recent work. Current concerns in landscape design will be reviewed against the trajectory of twentieth century modernism. Skills in project review, critical thinking and critical writing are extended.

BENV2222**Architectural Studies 1**

Architecture Program

UOC2 HPW0

An elective designed for students wishing to pursue an independent course of study in a field of architecture not falling within the domain of any existing elective. It requires the gathering of data, analysis of that material and reaching a conclusion. Descriptive summaries of published material are not an acceptable alternative to a well argued critical essay. Students are required to present a detailed program of study for approval by the Head of Program by the Friday of the first week of the session in which it is intended to enrol in this elective. For special conditions consult the Head of Program. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word processed in A4 format. Submissions will normally be about 2,000 words and be submitted by Friday of Week 13.

BENV2223**Architectural Studies 2**

Architecture Program

UOC3 HPW0

The intellectual and procedural requirements for this course are as described in BENV2222. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word processed in A4 format. Submissions will normally be about 3,500.

BENV2224**Architectural Studies 3**

Architecture Program

UOC6

The intellectual and procedural requirements for this course are as described in BENV2222. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word-processed in A4 format. Submissions will normally be about 7,500.

BENV2226

Chinese Gardens

Architecture Program
UOC6 HPW3

Introduction to the study of Chinese gardens focussing on key documents and some extant gardens. Lecture topics include: key notions of design, concepts of space/time, role of designers and visitors, movement and the experience of landscape, the relationship between pictorial space, garden design and literary tradition, and imaginary gardens. There are two key concerns: (1) cross-cultural relevance (what can the study of Chinese gardens offer to a cross-cultural dialogue in architecture and landscape architecture?) and (2) interdisciplinary perspective (how is the study of Chinese gardens related to recent work in some other fields such as geography, cultural studies, philosophy and the visual arts?). The main assignment is an exercise in spatial composition developed from a 17th-century Chinese handscroll.

BENV2228

20th Century Architecture : Modernity to Deconstruction

Architecture Program
UOC6 HPW3

This course is a study of key moments in twentieth-century architecture through the examination of selected buildings and the writings of architects. Among sources to be discussed are works by architects such as Le Corbusier, Mies van der Rohe, Walter Gropius, and cultural theorists and philosophers such as Theodor Adorno, Gaston Bachelard, and Gianni Vattimo. Material is presented as electronic seminars.

BENV2230

Principles and Philosophy of Design

Interior Architecture Program
UOC3 HPW2

The currently popular pseudo-elitist view of art and design is rejected in favour of the proposition that the artist is not a special kind of person but that every person is a special kind of artist. Design is not something which is practiced by the elite few who call themselves designers but by all of us all of the time. This course looks closely at the principles which underpin design in its broadest meaning and application, from the most simple, seemingly intuitive to the most complex of decision-making processes. These principles are studied within a philosophical framework strongly linked to the 'perennial philosophy' which may be found in all cultures and at all times and which has been particularly championed in our age by such writers as A.K. Coomaraswamy, Frithjof Schuon and Rene Guenon, and based heavily upon the work of the late Visiting-Professor Peter Kollar. Students who have completed INTA2101 or INTA2102 cannot enrol in this course.

BENV2231

Process in Architecture and Landscape

Faculty of the Built Environment
UOC6 HPW3

This elective deals with ideas of process in architectural and landscape architectural writings. Recent developments on the east coast of the United States and in the Netherlands are the focus of this elective. (E.g. projects by Adriaan Geuze, MVRDV and West 8; writings by James Corner, Stan Allen, and Sanford Kwinter, etc.) The elective will explore the idea that these recent developments have, more than at any other time in this century, opened possibilities for fruitful engagement with Chinese cultural interests. Four weeks of the programme will be devoted to comparative work.

BENV2232

Thinking Through Drawings 1

Architecture Program
UOC6 HPW3

Prerequisite: ARCH1202 or (LAND1142, LAND1152).

This elective helps students develop a more focussed reading of architectural drawings and photographs through case studies from

the 20th century. Emphasis is placed on reading in detail, reading for discrepancies, reading for temporal specifics, reading images in relation to what is written about them, reading for the students' current design projects. The architects to be studied include: Rem Koolhaas, Ben van Berkel, MVRDV, Enric Miralles, Herzog and de Meuron, Kazuyo Sejima and Tadao Ando.

BENV2233

Architectural Images

Architecture Program
UOC6 HPW3

This elective takes as its subject the current fascination in architectural discourse and practice with 'the image'. Each year the elective will focus on a different aspect of architecture's engagement with the image. Previous topics have included: the relation of the discourse on the image to the discourse on ornament; urban advertising images and urban experience; journal publishing in architecture; the media of cross-cultural interaction in architecture; the interlinking of domesticity and urbanism in the representation of architecture. Students will engage with the techniques of presenting images graphically, as well as framing and resourcing critical discussions of topics through research and writing.

BENV2237

Thinking Through Drawings 2

Architecture Program
UOC6 HPW3

Prerequisite: ARCH1202 or (LAND1142, LAND1152).

This elective helps students develop a more focussed reading of architectural drawings and photographs through case studies from the 20th century. Emphasis is placed on reading in detail, reading for discrepancies, reading for temporal specifics, reading images in relation to what is written about them, reading for the students' current design projects. The architects to be studied include: Enric Miralles, Peter Wilson, Rafael Moneo, Alvaro Siza and Peter Zumthor.

Note: Subject to approval

BENV2238

Modern Architecture in India & Middle East

Architecture Program
UOC6 HPW3

This course will explore the role and significance of 'modern' architecture in the making of nation states. Seminars and selected readings will explore topics such as: Spatial strategies for asserting nationhood such as maps, boundaries, government buildings, monuments, museums, domestic architecture, events in public space, stylistic hegemony, etc; cultural borrowings and architectural exchange between 'East' and 'West'; and the tension and overlaps between the ideals of Internationalisation and the construction of a local identity. While the seminar's focus on India and Bangladesh will situate the discussion within the politics of post-colonial independence, selected themes will be discussed as they relate to other sites of investigation including the birth of Israel and the post war re-construction in Lebanon.

BENV2239

Cultural Pluralism in Modern European Architecture

Architecture Program
UOC6 HPW3

This course promotes an understanding of 20th-century architecture in terms of cultural pluralism and questions the homogeneous nature of the "International Style". It highlights the diversity in architectural debates and situates them in the context of different political agendas, multicultural histories and cultural traditions. The class will discuss the modernists' increasing interest in the "Orient" and its impact on architectural production, as well as the search for modern architecture that would reflect "national" identity. Examples to be studied include Le Corbusier's Journey to the East (a record of his travels from Vienna, Budapest, Belgrade to Istanbul and Athens), which demonstrates how Le Corbusier's encounters of the "East" and Islam had a formative influence on some of his most famous works. The architectural and landscape designs of the Slovenian architect Joze Plecnik, including Prague Castle and the urban designs for the Slovenian capitol Ljubljana, will show how his interest in the "roots of Western civilization" and Roman architecture suggested an alternative path in modernism. Architecture in the cities of Sarajevo, Vienna and Istanbul will also be studied. Assessment is based on a textual and visual study of a selected architectural, landscape or design project.

BENV2240**Domestic Architecture in Islam and the Poetics of Space**

Architecture Program
UOC6 HPW3

This course investigates the domestic sphere in an Islamic context. Students will become familiar with the history, structure, and social use of residential forms in areas that are now a part of Arabia, North Africa and Egypt, Greater Syria, Iran, Iraq, Turkey and the Ottoman Balkans. They also will be introduced to the ways these spaces have been imaged and imagined in art, novels, memoirs, films, and scholarly texts. By considering residences as they are built and as they are described, students will learn both how architecture is historically specific and how it is invested with public and private meanings. Material is presented as electronic seminars.

BENV2241**The Culture of Materials**

Architecture Program
UOC6 HPW3

This course looks at the relation between some of the common materials of building construction as they exist in different cultural regimes and ecologies-in particular, timber, steel, concrete and plastic. The course will then introduce a number of perspectives on these materials that show them to be constantly in the process of being given different meanings, values and applications by both different national and trans-national cultures. The course will also examine topics such as: connections between design and materials, how the material world is viewed, making, cultural change, the past and the future. The last part of this course explores cultures of use and value. Although not employing a materials science approach, some technical detail will be presented.

Note: Subject to approval

BENV2244**Materials and Their Symbolism**

Interior Architecture Program
UOC3 HPW3

Prerequisite: INTA2202 or equivalent Year 2 Design Studio; Excluded: INTA1311.

The role of material as medium and message in architecture. The symbolic language of materials. The relationship between material and idea in the works of significant designers and architects. Research project(s) investigating the sources, manufacture, properties, characteristics and uses of a wide variety of materials.

BENV2245**Colour and Light in Environmental Design**

Interior Architecture Program
UOC6 HPW3

Prerequisite: INTA2102 or equivalent Year 1 Design Studio; Excluded: INTA1342.

A series of lectures and projects examining the history, practice and theories of colour and light. Practical experience to enable students to: precisely identify and exactly recreate any hue; develop an understanding of the subjective nature of colour vision; develop an awareness of the difference between the additive and subtractive systems of light-projected and physical colour.

BENV2247**Design Approaches in Italian Architectural History**

Architecture Program
UOC6 HPW0

This course investigates the architectural and architectural/theoretical work of Italian theorists from Leon Battista Alberti to the early 1600 with reference to Vitruvius's writings and the work of Italian Architects from Sant'Elia to the present. Architects to be studied will include Francesco di Giorgio, Filarete, Palladio, Scamozzi, Piacentini, Terragni and Libera. The course will focus on the differences in approach to the various interpretations of ancient sources and to the many uses of the Roman architectural prototypes. The course will assist students to recognise how the interpretation of the ancient sources involves the relationship between the city's urban structure and the design process of the building.

BENV2250**Glass in 20th-century Architecture**

Architecture Program
UOC6

This elective deals with the introduction of glass into architectural design as a modern material. The use of glass will be studied in experimental

buildings by modern architects such as Mies van der Rohe, Le Corbusier and Pierre Chareau. The concepts of transparency, opacity, translucency and "light architecture" will offer students a useful vantage point to consider the re-emergence of glass in recent works of architects such as Rem Koolhaas, Herzog & de Meuron and Peter Zumthor. Assignments will include discussions on readings and short essays on some exemplary buildings. This course will be offered in electronic seminar format.

BENV2252**Chinese Architecture**

Architecture Program
UOC6 HPW3

Introduction to studies of traditional Chinese architecture and city planning. The lectures cover a series of selected topics, such as the maturation and principles of the trabeated system of timber buildings, the patterning of spatial sequence, symbolism in the construction of buildings and cities, medieval urban transition, urban land use, and public space, each centred on a prominent architectural or urban feature that is representative of a specific historic period. Emphasis will be placed on treating the Chinese experience as an axiomatic part in world civilization, rather than as an exotic and mysterious heritage of the past. Such an emphasis implies two primary concerns: (1) cross-cultural dialogue in architectural and urban history, and (2) the relevance of the studies to contemporary issues in architectural design and city planning. Assessment is based on in-class discussion, a series of short literature reviews, and one major assignment

BENV2302**Painting and Design: Hybridity**

Architecture Program
UOC6 HPW2

This is a practical course in acrylic painting techniques in relationship to design and architecture. The course concentrates on color theory and the technical aspects of painting by working through a series of both 2D and 3D visual, spatial and design problems that attempt to awaken new avenues of design thinking by juxtaposing different painting techniques, styles, images and ways of thinking about visuality and aesthetics. This course aims to expand each student's visual consciousness through practical painting exercises allowing personal insights (on color, shape, form, surface or texture) to seep into their consciousness flowing in the slow-time of painting with the beat of the heart, and the integrated sensuality of hand and mind. This is a studio-based subject involving intensive, practical, hands-on exercises taught simultaneously with design theory requiring and developing lateral thinking and creativity.

BENV2303**Drawing and Design: Seeing, Thinking, Understanding**

Architecture Program
UOC6 HPW3

This course involves investigation into the basic technical, aesthetic and conceptual aspects of drawing. The philosophy of the course is that drawing is a skill that is both visual and experiential, which evokes through practice - insights, associations and resonances - indicating each student's individual understanding of both the objective world and the world of their imagination. The course teaches basic drawing skills - how to see, think and respond through drawing to a variety of visual problems. This is a studio-based subject involving intensive, practical, hands-on exercises taught simultaneously with visual theory. Ultimately I seek to expand each student's visual vocabulary, aesthetic consciousness and creativity through an interwoven series of exercises based on important moments in 20th century architectural, design and visual history.

BENV2304**Colour Theory in Architecture and its Environs**

Interior Architecture Program
UOC3 HPW2

This course aims to develop a practical knowledge of the theories of colour, its historic antecedents and possible future applications including investigations of light and colour as natural phenomena. A series of studio-based exercises, lectures and discussions create a basic understanding of the nature of personal colour perception and bias. Analysis of the relationships colours create with other colours and the nature of colours within their surrounding architectural and environmental context.

BENV2305**Graphic Design for Architects, Interior Architects, Landscape Architects and Industrial Designers**

Interior Architecture Program
UOC6 HPW3

This elective is open to students in the Architecture, Interior Architecture, Landscape Architecture and Industrial Design Programs. The seamless integration of the products of graphic design into commercial and urban spaces, at both the intimate and public scales, is expected of architects and designers. This course aims to give students the skills to attempt a basic level of graphic design and to become familiar with the wide range of graphic techniques and materials available. At the end of the course the student should understand techniques for integrating graphic materials into buildings and be able to brief a graphic designer for the most complex of tasks. Material covered in the course would include the basics of typography, layout design and illustration. Techniques for printing, including those for incorporating images into a range of building materials would be introduced. In addition topics such as: digital reproduction technologies, digital and analogue colour systems, paper engineering and three-dimensional graphic representation will be included. Concepts of corporate imaging and marketing within the context of the retail/hospitality/corporate environment will be dealt with. Discussion in class will include topics such as Venturi's "Building as Duck". Students will be expected to undertake a range of activities including exercises in preparing graphic material and the presentation of case studies of successful graphic packaging.

BENV2309

Combined Exhibition

Architecture Program
UOC3 HPW0

Architecture as a discipline and profession is undertaken in the public realm of Communities. Exhibitions and presentations of architectural projects contribute to enhancing public debate about architecture. This course provides an opportunity for students to engage in the creation, planning, organisation, management and documentation of the Architecture Program Graduation Exhibition. Students will be required to liaise with Faculty, Program staff and students, Architectural profession and Industry. Enrolled students will be required to identify areas in which they can contribute. Assignment tasks will be negotiated with enrolled students.

BENV2311

Digital Drawing Body Sculpture

Architecture Program
UOC6 HPW0

Life drawing is an ancient and powerful exercise in increasing our ability to perceive and communicate form. The course provides an opportunity for students to represent and explore the human body, examine concepts of form, structure, skin and cladding and the body's relationship to physical and virtual space. Students will explore digital methods of sculpting the human figure using quick computer modelling techniques as well as the more traditional techniques of drawing the clothed, partially clothed and unclothed human figure.

The course involves group based drawing and computer lab sessions, and independent work. It is open to Faculty students who have successfully completed Year 2 of their program, enjoy drawing from life models, can work and learn independently and who enjoy working with others in the setting of the Studio and Lab.

BENV2312

Model-Making as an Interpretive Practice

Architecture Program
UOC6

This elective provides an opportunity for students to engage with physical model making as an interpretative, conceptual, design practice, one that mediates our understanding of spaces and places in the natural and urban landscape. It encourages students to pursue a purposeful, considered, strategic approach to designing spaces that are informed by personal observation, experiences and reflections of place. Improving and extending student capability in the making and crafting of models is a key aspect of this course.

Students will be required to undertake a range of investigations of a space in the landscape. Using a variety of materials, model making techniques and scales students will construct a series of models that are evocative of the particularities of that space, and its place in the landscape. In improving their model making skills and techniques students will investigate the potential relationships between material choice, site, representation and craft technique.

Involving field and studio work this studio will focus on process development and encourages students to be observant and systematic in undertaking investigations, creative in exploring and experimenting with materials, assemblies and interpretive possibilities, reflective about

their decision making, diligent and economic in their craft technique in the making of the models. Assessment in this course will be based on both process and product work. There will be two assessable tasks. An economic selection of materials and tools will be made available.

BENV2313

Introduction to Architectural Photography

Architecture Program
UOC6

Prerequisite: ARCH1201 or ARCH1202

This elective provides an opportunity for students to understand and practice basic principles and techniques of traditional and digital photography when applied to architectural photography. This will assist students in firstly, the photographic recording of artwork, models and building structures, secondly, presentation of those images as a portfolio of work and thirdly, inform their working relationship with professional photographers in the industry. The course involves lectures and workshops.

Assessment in this course will be based on process and product work. There will be four assessable tasks. Three involve photographic work (artwork image, project model image and building image) and students will be required to maintain a process journal. Student work will be exhibited at the conclusion of this course.

BENV2314

Photography, Society, and the Built Environment

Interior Architecture Program
UOC3 HPW3

This elective will give students an individual opportunity to use a camera as a visual research tool in the exploration of society and the built environment. The course involves theory and practice. A series of lectures covering different aspects of social documentary: a brief history of this genre, photojournalism, the photo-essay, street photography, oral history, the family album; and an introduction to some contemporary photographers detailing the urban environment through pattern or landscape.

In Photography there is an intimate link between the image and the original. Light acting on and transforming emulsion still seems magical, or thousands of pixels transferred digitally to catch a moment in time is extraordinary. The ability to freeze frame movement in space, hold still light in time, document our communities today for tomorrow, record our visual reality is a powerful tool. With this power comes certain responsibility.

BENV2318

Landscape Photography

Faculty of the Built Environment
UOC3

This course, offered as an intensive elective over two weeks, will introduce students to the potential for using photography as a tool for analysing, documenting and communicating about landscape. Course content will include: different applications of photography for landscape architecture; composition theory and how information is conveyed through a photograph; use of light and contrast; principles of film-based and digital photography; and techniques for preparing photos for exhibition. Students must provide their own camera and cover the course associated with film developing and printing.

BENV2402

Design Modelling - Time Based Visualisation

Architecture Program
UOC6 HPW3

Prerequisite: BENV1341 or BENV2401 or IDES3231.

This elective will align design techniques with time based 3D digital environments. It will extend digital visualisation skills by introducing sequencing and storyboards into 3D digital environments. Computer Lab based exercises will cover 3D composition, time based form generation and narrative in digital 3D. Development of presentation techniques such as video editing, QuickTime VR, and VRML will be included in the final presentation. Assessment will be based on earlier staged learning exercises and one major design presentation project.

BENV2403

Information Technology in Design and Construction

Faculty of the Built Environment
UOC3 HPW2

Prerequisite: BENV1141.

This course introduces the issues, problems and solutions relating to the creation and distribution of information within the building industry. It includes topics such as: database systems; interaction with CAD system graphics databases; transmission of data; networking and communication technologies; shared technical databases; establishment of product information standards; conceptual modelling techniques; and design information systems. Assessment is by means of projects and student seminars.

BENV2404**CAD Management for Architects**

Architecture Program

UOC3 HPW2

This course raises the issues relating to the implementation and management of CAD systems in architectural practices. Topics will include: CAD system selection and installation; cost issues (purchase, maintenance, upgrades); political implications within practices; software customization; resource management; office standards; and training. Assessment is by means of projects and student seminars.

BENV2405**Computer Graphics Programming**

Architecture Program

UOC6 HPW3

Prerequisite: BENV1141.

This course introduces the fundamentals of interactive computer graphics programming within the context of a typical architectural CAD system. Specifically, students will be introduced to the process of developing GDL scripts within ArchiCAD for the purpose of creating what in the industry have become known as 'smart objects'. This is a process and technology that is being used increasingly in architectural practices where ArchiCAD is used to produce complex 3D component building models. Topics to be covered: concepts of building modelling with ArchiCAD; types of smart objects; parametric library objects; object intelligence; GDL scripting; program planning, design and debugging. Assessment will be project-based involving the development of GDL library parts with a range of complexity.

BENV2406**Design and Computation**

Architecture Program

UOC3 HPW2

Prerequisite: BENV1141.

This course is based on extensive reading and group discussion, exploring a range of theoretical approaches to the use of computation techniques in support of the act and processes of architectural design. Topics include: traditional approaches to architectural computing including space planning, facilities management, building performance analysis, information systems and operations research; knowledge-based systems and knowledge representation techniques; shape grammars; expert systems; and design information systems. Assessment is based on participation in discussion, the preparation of regular reports on readings and one major essay task.

BENV2408**Building Information Systems**

Building Construction Management Program

UOC6 HPW3

The specification, development and use of computer based information systems in the management of building construction projects. Current networking and communication technologies; digital document formats and environments; information system lifecycle; relational database structures; shared information databases through project intranets; computer programs for cost management; and CAD product modelling standards for interoperability with other applications.

BENV2409**Advanced Multimedia**

Architecture Program

UOC6 HPW3

Prerequisite: BENV1043

Web Page: <http://www.fbe.unsw.edu.au/courses/benv/2409/>. This course explores a range of advanced multimedia concepts and issues. This will include creating interactive 3D environments, exporting information created on the fly, controlling video and animation, and programming. Students are expected to be adept at the material covered in the prerequisite course.

BENV2410**Advanced Webpage Design**

Architecture Program

UOC6 HPW3

Prerequisite: BENV1042

Web Page: <http://www.fbe.unsw.edu.au/courses/benv/2410/>. This course explores a range of issues and technologies relating to the creation and maintenance of websites. Topics will include: an analysis of web Search Engines; Cascading Style Sheets (CSS); Dynamic HTML (DHTML); and Active Server Pages (ASP). Students are expected to be adept at the material covered in the prerequisite course.

BENV2412**Modelling Sustainable Design**

Faculty of the Built Environment

UOC6

Whether a building is truly 'sustainable' is almost impossible to define. It is possible, however, to determine a range of ecological impacts and to benchmark one building against another. Conducting such an assessment is increasingly being demanded of architects by regulatory authorities and clients prior to construction. Dwellings in NSW are subject to a minimum House Energy Rating assessment as condition of Council approval. Similarly, certain commercial buildings must provide an Energy Performance Report; and energy and environmental impacts must now be included in Statements of Environmental Effects for Development Approval. Architects must have the tools and skills to provide an accurate and quantifiable assessment of the environmental credentials of their designs. All this, and without compromising the aesthetic integrity of the building or resorting to textbook ESD solutions. As with all other constraints placed on architects, there exist myriad opportunities to use the environmentally sustainable aspects of the building as a generator of theoretical and aesthetic ideas. This course will allow students to assess previous studio designs in terms of thermal performance, energy used in manufacturing of materials, the ability of the building to be self sufficient for its resource requirements, and waste reduction. This will be conducted using both spreadsheet and simulation tools. The design will then be modified to improve its environmental credentials. The interaction of these changes with the original design will be explored using CAD tools. This course will be based in the Computer Lab and students are required to have completed BENV1242 or another CAD based subject. It is open to Architecture students who have successfully completed or been exempted from the first session of Year 3 and have confidence using spreadsheet software packages such as Excel in Microsoft Office. This course provides committed students an opportunity to explore the nexus between environmental sustainability and good design.

BENV2414**Advanced Digital Graphic Communications**

Landscape Architecture Program

UOC6

This course will introduce students to digital media and its use as a mode of representation for design ideas. Digital media is becoming the most common form of design communication for landscape architects and other design professions. It is a representation method that can and should be used to inform designs and not only as a presentation tool. The course will educate students in the use and application of digital media. It will equip students with skills in digital photographic enhancement and composition of images that will help to communicate design ideas through graphic representation and montage. The course will be run in a predominately digital format.

BENV2417**Digital Production and Design of Poster Presentations**

Architecture Program

UOC3 HPW3

This course provides an opportunity for students to develop capabilities in the use of image editing techniques for the production of A4 to A1 format poster presentations. The course also addresses graphic design and composition techniques and tactics, as well as the technical issues associated with colour printing of digitally generated presentation work. At the completion of the course students should be confident in using the tools of the software program, 'photoshop', be able to compose and design for digital production, effective image/text presentation posters and formats.

BENV2420**Building Modelling, Rendition and Presentation**

Architecture Program

UOC6 HPW3

Prerequisite: BENV1242.

This course assumes a working knowledge of 3D object-based CAD modelling and the process of extracting and producing traditional orthogonal drawings directly from a 3D building model. This elective builds on that base knowledge to develop an understanding of the range of techniques and strategies of design documentation and representation that can flow from the use of a 3D building model. The emphasis of the course will be on the smooth movement of data between a range of software tools to achieve quality, precision and clarity in 2D paper-based presentation of design concepts. Lectures are used to discuss a range of communication strategies and the tools available to achieve those. Practical and explorative experience is achieved through a series of graded exercises culminating in a major project to demonstrate the level of knowledge and skill achieved.

BENV2603**Lightweight Structural Design**

Architecture Program

UOC6 HPW3

Integrated architectural/structural/constructional/environmental design of cable, cable-net, membrane, tensegrity, shell and folded surface structures in lightweight materials (concrete, timber, metals and composites). Current issues related to on-going research and development. Structural ideologies. Seminar and project(s). Model and computer laboratory work and occasional construction workshop.

BENV2604**Structural Systems: Basic**

Architecture Program

UOC6 HPW3

Building upon a typical introductory structures course (such as Technology 1) this course deals in depths with basic systems such as arch, beam, cable, frame, truss, slab/plate, membrane, shell and several of their many variations. The course is a useful basis for further elective study in structures and for design and construction: The fundamental requirement for any architectural designer embarking upon the structural design of buildings and objects is a basic understanding of structural systems and their structural behaviour under load. Equipped with such understanding the student/designer gains the necessary confidence to distinguish between different structural possibilities for any particular design and choose the appropriate one. Subsequently she/he is able to approach structural material choice and structural detailing of connections on a sound basis of proven structural relevance. The teaching approach to this subject is predominantly visual with only limited numerics. Basic structural systems will be discussed by means of readily understood graphical diagrams and will be illustrated with cases of typical structural applications. Short exercises accompany the lectures with typical solutions presented in class. Student learning occurs during exercise completion combined with study of practical examples and the relevant literature, peer discussion and feedback from the lecturer. Assessment will be by student engagement in class as witnessed by timely and successful completion of exercises, active participation in discussion and by attendance.

BENV2701**Advanced Building Materials (Ceramics)**

Architecture Program

UOC6 HPW3

Ceramic materials; the nature of cements, concrete, glass and similar products. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2702**Advanced Building Materials (Organics)**

Architecture Program

UOC6 HPW3

Organic materials; the nature of wood and synthetic polymers. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2703**Advanced Building Materials (Metals)**

Architecture Program

UOC6 HPW3

Metals, ferrous and non-ferrous, their nature and use. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2704**Advanced Construction Systems**

Architecture Program

UOC3 HPW2

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

BENV2707**Advanced Landscape Engineering**

Landscape Architecture Program

UOC3 HPW2

More complex landscape engineering problems are undertaken, particularly in relation to sustainable landscape engineering solutions, as well as projects that integrate, eg public art, constructed wetlands, specialty paving, water features, specialty lighting.

BENV2708**Interior Detailing**

Interior Architecture Program

UOC6 HPW3

Prerequisite: INTA2202 or equivalent Year 2 Design Studio.

Design resolution at a fine scale highlighting issues of quality and the central role of detailing in achieving buildings and interiors which are original and coherent examples of good design. The practice and technology of detailing interiors seeking to enhance the designer's critical capacity when assessing options and extending their design vocabulary. The discipline of extending design concepts from the overall to the specific and planning strategies for detailing while at an early stage of the design process. Tutorials based upon recent examples of detailing will be supplemented by lectures dealing with techniques of documentation, structuring building contracts to support successful outcomes in building procurement. Lectures will cover material related to building methods and technologies: included will be detailing stainless steel, timber veneer, plastic laminates, timber joinery, specifying finishes such as polyurethane, epoxy, stains and coatings. The program will be centred about guest lecturers presenting examples of their work as case studies of successful detailing.

BENV2709**Construction 6 (Industrialisation and Technological Change)**

Building Construction Management Program

UOC3 HPW3

Concept of industrialisation; historical trends. International experience. Effect of demand on construction technology. Tolerance in building; quality management, modular coordination. New technologies in manufacture and construction. Government policy. Internationalisation and future trends.

BENV2710**International House Practice**

Building Construction Management Program

UOC3 HPW2

Focuses on procurement and production processes relating to housing development. Factors of interest include: government housing policy, design, development approval process, land subdivision, property titling, construction, financing and marketing. Case studies are used to portray how these factors compete within a market system. Australian and overseas contexts are studied.

BENV2712**Technology for Tropical Architecture**

Architecture Program

UOC6

Outline: To study tropical architecture in context. Those undertaking this elective will develop an understanding of influences on tropical architectural practice: including climatic, cultural, environmental and

sustainability issues. There will also be an opportunity to study historical contemporary tropical architecture. This elective is open to Architecture students. There will be a field trip cost attached to this course. Any student intending to take this course must contact Graham Bell prior to enrolling.

BENV2713**Furniture Design 1**

Interior Architecture Program
UOC3 HPW3

Through a series of lectures, tutorials, demonstrations and practical design projects, this course addresses issues of design philosophy, ecology, scale, context, spatial relationships, materials, technologies and resources appropriate to the design of furniture and fittings - the decorative arts for interiors.

BENV2714**Furniture Design 2**

Interior Architecture Program
UOC3 HPW3

A guided research-based course concerned with the design and manufacture of furniture and fittings for mainly commercial applications. A research project and practical design assignment will focus on specific case studies.

BENV2715**Textiles in Interior Architecture**

Interior Architecture Program
UOC3 HPW3

Prerequisite: INTA2102 or equivalent Year 1 Design Studio. Excluded: INTA1312.

A study of textiles and fabrics and their applications in interior architecture. The course will examine in some detail origins, structures, properties and manufacturing processes dealing with fibres, yarns and materials: woven, non-woven and knitted materials. Patterning, including structural and non-structural ornamentation. Further treatments and applications of materials. Standards of use and durability. New directions, concepts and future implications.

BENV2716**Design and Technology-Timber**

Architecture Program
UOC6

Prerequisite: ARCH1371

This course aims to develop students appreciation and understanding of the potential of engineered timber and prefabrication in the context of a simple design accommodation brief. While resolving the design as a whole the emphasis will be on the resolution and documenting of the timber structure, construction and detailing of the project.

It is recommended that students speak with Peter Murray prior to enrolling.

BENV2718**Construction Technology 4 (Industrialisation & Technological Change)**

Building Construction Management Program
UOC3 HPW2

Concept of industrialisation; historical trends. International experience. Effect of demand on construction technology. Tolerance in building; quality management, modular coordination. New technologies in manufacture and construction. Government policy. Internationalisation and future trends.

BENV2719**Housing Delivery Systems**

Building Construction Management Program
UOC3 HPW2

High, medium and low density housing development in terms of the entire procurement production process. Factors directly involved in the process and other issues that impact on it including government housing policy, regulatory instruments, the commercial and social environment, land subdivision, property titling, urban planning, construction, financing and marketing. Current practices and future trends in various countries. International approaches to housing procurement. Quality in housing.

BENV2720**Introduction to Lighting and Acoustics**

Architecture Program
UOC4 HPW2

Lighting: Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Acoustics: Acoustics and noise control: design of rooms, basic shape and volume, acceptable ambient levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noise levels, structural borne and impact sound, reverberation times, selection of building envelope elements, selection of interior building materials and elements.

BENV2721**Lightweight Tropical Construction Project**

Architecture Program
UOC6

Students will apply their understanding of construction and Occupational Health & Safety Issues in the construction on campus of Simon Scally's Love Shack (Darwin). It is envisaged that under the leadership of a project manager the students will work in agreed teams to assemble and then construct the Love Shack. The construction will take some time and the timetable for which will be determined by the respective teams. It is envisaged therefore that the final erection will be in the last week of the mid year break.

The desired outcomes are: an application of construction knowledge, an understanding of the importance of team work in any project, appreciation of common building materials their jointing and fitting and the pleasure in the completion of a Love Shack which is for Sydney and client-based on Simon Scally's in Darwin.

BENV2722**Advanced Construction Systems**

Architecture Program
UOC6 HPW2

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

BENV2802**The Architect and the Law**

Architecture Program
UOC6 HPW2

This course will cover contract law, tort law, consumer protection law, professional practice and ethics, design law, construction law, valuation, financing, resource and land law, development and building control, dispute resolution and evidence and expert witness..

BENV2804**Construction Planning and Management**

Faculty of the Built Environment
UOC3 HPW2

The role of the Architect and Builder in the traditional building procurement process. Construction management and coordination of the building process. New management directions for improved performance and coordination in the building industry. The role of the Developer and Project Manager in the procurement of buildings. Building economics and property evaluation. Principles of scientific management and organization, individual group behaviour, motivation techniques, planning, organising, directing and control.

BENV2805**Project Management and The Design Process**

Faculty of the Built Environment
UOC6 HPW3

The nature of projects. Definition of project phases. The impact of procurement process on project outcomes. Project risk analysis and project organizational design. Client needs determination and managing the design process. Scope management.

BENV2806**Organisational Behaviour**

Building Construction Management Program
UOC3 HPW3

Organizational design. Types of organizations and fitting organizational structure to environment. Leadership. Reward processes. Expectancy Theory. Organizational change.

BENV2807**Management 7 (Marketing)**

Building Construction Management Program
UOC3 HPW3

Marketing for builders and developers in the Australian and Pacific environment with particular emphasis on the marketing mix, the relationship between a marketing system and its environment, development of marketing, tactics and strategy, market segmentation and the buyer decision process. Listing, selling and the auction process.

BENV2812

Documentation Techniques for Major Buildings

Architecture Program
UOC6 HPW2

Students will learn what is involved in completing a comprehensive set of documents comprising Working Drawings, Details, Specification and Schedules required for tender and successful completion of the construction of major buildings. Students will also learn about construction design details and many aspects of the legal and technical implication in the documentation.

BENV2813

Construction Marketing

Building Construction Management Program
UOC3 HPW2

Marketing for builders and developers in the Australian and Pacific environment with particular emphasis on the marketing mix, the relationship between a marketing system and its environment, development of marketing, tactics and strategy, market segmentation and the buyer decision process. Listing, selling and the auction process. Market Research.

BENV2814

Property Law

Building Construction Management Program
UOC6 HPW3

Recognition of the significance of different land titles, tenures and interests in land; understand the construction and content of contracts, leases and other forms of agreement required for property dealings and use; develop a familiarity with public and private controls and restrictions on land use and development; appreciate the relationship between planning policies at all levels and the valuation process; a knowledge of the valuation review and determination processes of the Land and Environment Court and similar tribunals; appreciate the requirements for presentation of evidence as an expert witness; acquire a familiarity with major court cases, relevant to the valuer, which establish valuation principles; understand the major objectives of principal New South Wales Acts dealing with real estate or interests therein. Judicial valuation, legal precedent, land titles and rights.

BENV2815

Construction Management 4A (Project Management & Design Process)

Building Construction Management Program
UOC6 HPW3

The nature of projects. Definition of project phases. The impact of the procurement process on project outcomes. Project risk analysis and project organisational design. Client needs determination and managing the design process. Scope management.

BENV2816

Construction Organisational Behaviour

Building Construction Management Program
UOC6 HPW3

All management courses from years 1 - 3 of the BBCM.

A study of the following topics from a construction industry perspective: Organisational design. Types of organisations and fitting organisational structure to the environment. Leadership. Reward processes. Expectancy theory. Organisational change.

BENV2901

City Planning Today

Planning and Urban Development
UOC3 HPW2

Excluded: Program 3360.

The way our cities look and operate, their cultural and community life are all considered by town planners. The course deals with the fundamentals of urban planning, its language, its rules and regulations; its controversial nature and the way it operates in practice. It looks at how and why urban planning came into being; how the legal and administrative system works; how the political system operates; and how planners deal with issues -

from designing the city to balancing the many conflicts which arise over development projects. Lectures are given by staff of the Faculty of the Built Environment as well as planning practitioners. This course will give you the skills, the understanding and the enthusiasm to play an active role in shaping your city.

BENV2902

The City: Sydney

Landscape Architecture Program
UOC3 HPW2

This course critically examines the pace, scale and dynamic transformation of Sydney at the beginning of the twenty-first century. The physical form of the city, its environmental qualities and social patterns will be examined in terms of the theoretical literature on the culture of cities and techniques of reading the urban landscape. The study of Sydney's urban form and urban life will be based on a series of lectures, seminars and city walks.

BENV2903

Urban Design

Architecture Program
UOC6 HPW3

Design studies in the integration of buildings and groups of buildings in their urban context, and of spaces between buildings, accommodation of pedestrian and vehicular movement, micro-climate. Material is presented by students every week supported by instructor's lectures with a final tutorial completing the course requirement.

BENV2904

Public Art

Architecture Program
UOC6 HPW3

This course examines recent Australian and overseas art that addresses ideas of place and context and that is situated in the public domain. Public art can be an individualistic exercise but more often it results from professional collaboration between artists, designers of the built environment, and the community. Art in public places provides opportunities for design professionals to grapple with historical, social, cultural, environmental and other issues in the creative process. Increasingly state and local governments are developing policies to encourage public art: in some overseas countries a fixed percentage of the costs of a public building must be spent on providing site/place-specific art. This elective has two **Objectives**: one is to examine aspects of the current theoretical discourse on public art, and to debate these ideas in student-led seminars; the other objective is to enable students to conduct research into local recent public art and to write a critical appraisal of a particular work. It is hoped that the research will be incorporated (and acknowledged) in a wider Department-based project on public art, architecture and urban design in Sydney. Material is presented as a mix of lectures and seminars.

BENV2923

Images of Sydney

Planning and Urban Development
UOC6 HPW3

This course explores how an understanding of cities and how they are appreciated by those who live in them can be communicated visually. 'Images of Sydney' encourages students to capture the flavour and variety of living in Sydney on film. The course includes lectures on aspects of urban design and social documentary photography. Participants, using disposable cameras, take images which are critiqued and reviewed by the class. Students compile course journals covering not only reflections on the student's particular topic, but also photographic exhibitions visited, lectures attended, and relevant articles and books read during the semester. The major outcome is an end-of-session exhibition. Each student is responsible for presenting a collection of the photos they have taken with suitable captions and commentary conveying how the photographs help interpret the experience of the city.

BENV2937

Urban and Regional Design: Critique and Innovation

Planning and Urban Development
UOC6 HPW3

This course reviews the principles of urban design and guides students through urban design methodology via a series of small design projects. Teaching is through "enquiry by design" whereby lectures, site visits and case studies assist students' learning and development through the exploration of design projects of varying scales and contexts (e.g. town

centres, concept designs for specific sites, structure plans). Specific aims of the course include developing an awareness of the scope of urban design projects, an appreciation of the physical structure of places, an understanding of shaping built form, a familiarity with a range of building typologies, and an appreciation of current urban design issues and debates. Particular skills to be reviewed include site analysis methodology, establishing robust planning and design principles, mapping and spatial understanding, design review criteria and mechanisms of development control.

BENV2938**Transport Planning**

Planning and Urban Development

UOC6 HPW3

This course aims to provide an introductory understanding of the role of transport planning as a planning tool that can be used to achieve positive planning outcomes in the urban built form. It provides an introduction to the theoretical, applied and policy aspects of transportation planning with special reference to public transport issues in Sydney. It covers introductory elements of transport planning and forecasting and their place in the planning process, specific elements of transport planning theory, and case studies through lectures, guest lectures and site visits. The course is underpinned by notions of transport-land use planning integration and sustainability.

BENV2942**Rural Planning**

Planning and Urban Development

UOC6 HPW3

This course has been designed specifically to give students an appreciation of the issues associated with planning for rural areas, a vital component of land use management in Australia. Rural areas include the agricultural land, natural areas and urban settlements of regional Australia. It introduces students to a range of practical planning documents and instruments, including rural lands studies, rural strategies, Local Environmental Plans and Development Control Plans. Students will also learn about the various policy mechanisms used both in Australia and overseas. The course utilises fieldbased learning and usually involves a fieldtrip to a rural NSW location during which students undertake a rural planning exercise with practical application for a local council.

BENV2943**Heritage Planning**

Planning and Urban Development

UOC6 HPW0

Prerequisite: PLAN3031.

This course for senior students provides an advanced overview of the theoretical, practical and policy aspects of issues concerning the conservation of environmental, heritage, both cultural and natural. The course deals with the objectives and purpose of heritage conservation, the definitions of heritage at international, national, state and local level: methods by which planners work to balance the demand for heritage conservation with the other needs of the urban and natural environment. The course deals with both the conceptual and pragmatic aspects of heritage conservation, dealing with heritage in an inclusive sense: biophysical, indigenous, cultural and built. The aim of the course is to ensure that built environment professionals have a full understanding of the theoretical, legislative and administrative aspects of the conservation of heritage.

BENV2944**Auckland Planning Elective**

Planning and Urban Development

UOC6 HPW0

Prerequisite: PLAN1011 or permission of course authority

The general aim of this elective is to enhance the experience of students through exposure to new and different planning ideas, systems, planning projects and urban management processes. It will involve an intensive, guided field investigation of planning issues in Auckland with a major focus on approaches to growth management, heritage, sustainability and contemporary redevelopment and renewal projects. The elective will entail visits to or inputs from state agencies, local authorities, developers and planning consultants including the Auckland City Council and the Auckland Regional Council. Among specific sites to be studied would be the Auckland CBD, the Aqueduct Basin, Waitakere, Arataki and Waiheke Island.

BENV2945**Planning Travel Elective**

Planning and Urban Development

UOC6 HPW4

The general aim of the elective is to enhance the experience of students in a small group context through exposure to new and different urban contexts, planning ideas, systems, planning projects and urban management processes. The course will involve an intensive, intensive guided field investigation of planning issues variously in international, interstate or non-metropolitan settlements with a focus on issues such as growth management, heritage, sustainability, urban design, transportation, strategic planning, and contemporary redevelopment and renewal projects. The elective will entail visits to or inputs from government agencies, local authorities, developers and planning consultants. Students will be required to pay costs of transport from and to Sydney, accommodation, meals, and incidental costs. Affordable motel or college-style accommodation would be negotiated. Students would be engaged individually and collectively in a major research and/or design project, the preparation for which would commence in the session preceding the trip with additional post-trip research, writing and presentation. Courses would be run subject to resources and student demand.

BENV2984**World Case Studies in Urban Design**

Architecture Program

UOC6 HPW3

This course looks at some diverse 20th century cities from an Urban Design perspective. It touches on the socio/political, economical and cultural influences of the built environment, the structure of physical components, strategic policies and recent historic influences. The focus is the fascination of urban design interventions and the ability to affect change as part of the dynamic process of cities. An urban design definition will be debated and the symbolic, memorable aspects of cities discussed. Students' personal experience of their city locales will form a valuable contribution to the course.

BENV2985**Land Economics & Valuation**

Building Construction Management Program

UOC6 HPW0

Prerequisite: 96 units of credit

The building process; market research; establishing the client's needs; site selection and analysis; feasibility studies and financing methods. Introduction to valuation. Time value of money and equivalence. Methods and philosophies of determining market valuations. Valuation techniques; knowledge of efficient property management techniques; identification of a range of unusual property types which require specialised valuation skills and knowledge and the means of developing such skills and knowledge; knowledge to develop novel valuation techniques for application to specific property types; ability to determine the highest and best use for nominated property types; the application of inspection techniques for broad property types; competency in the use of property valuation and inspection aids; familiarity with resource materials and information sources required to undertake specific types of valuation.

BENV2986**Property Management & Development**

Faculty of the Built Environment

UOC6 HPW3

Introduction to property asset management. Lease and tenancy management. Residential, Commercial, Industrial and Retail property management. Total Costs concept. Building maintenance and maintenance economics. Building maintenance cycles. Strata title management. Taxation in property management. Overview of the property market and investment analysis. Property development process. Feasibility study of development project.

BENV6000**The Dean's Honours Seminar**

Faculty of the Built Environment

UOC6 HPW2

The Seminar draws on advanced students from undergraduate programs to provide an interdisciplinary setting in which to investigate contemporary issues related to globalisation and development, and the built environment. The seminar will encourage, in particular, the study of policy and opportunities for change. To undertake this elective students must have been a member of the Dean's List (or equivalent) in one or

more sessions prior to enrolment, and must be in Stage 3 or later of their degree program.

BINF1001

Bioinformatics 1

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: BIOS1201, COMP1011 or COMP1711.

The course surveys the major areas of bioinformatics at an introductory level, exploring the history of bioinformatics in relation to advances in computing hardware and software; the biological problems currently being addressed using bioinformatics; and future applications of bioinformatics. Major topics include genomics; genome sequencing projects; proteomics; structural genomics; phylogeny; population biology; ecological modelling; medical informatics; and commercial applications of bioinformatics. The general nature of the data, computational problems and the approaches employed will be discussed in each case. Role of bioinformatics in the biotechnology industry. Structure of biotechnology industry stressing commercial, regulatory, and intellectual property areas. Diversity of industry sector and commercial case studies including biopharmaceuticals and gene therapy, use of transgenic plants and animals. Lectures are supplemented by practical exposure to public and commercial bioinformatics web sites.

Further Information: CSE class page www.bioinformatics.unsw.edu.au/course/

BINF2001

Bioinformatics 2

School of Computer Science and Engineering
UOC6 HPW6

Prerequisite: BINF1001

This course covers bioinformatics approaches that have become fundamental to genomic and post-genomic biology, with an emphasis on their evolutionary underpinnings. Topics include methods and algorithms for sequence analysis, classification and structure prediction; sequence, family and structure databases; genome project informatics; microarrays; pathways, networks and interactions. Practical work emphasises both use and development of software tools for bioinformatics analysis.

Further Information: CSE class page www.bioinformatics.unsw.edu.au/course/

BINF3001

Bioinformatics 3

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: BINF2001, COMP2041, COMP3121 or COMP3821;
Excluded: BINF3801.

This course demonstrates the application of computational, mathematical and statistical methods to problems in modern life sciences, through examples in nucleotide and protein structure, function and expression. System design and software development environments for bioinformatics are also explored. Practical work involves implementation and use of the techniques discussed in the course.

Further Information: CSE class page www.bioinformatics.unsw.edu.au/course/

BINF4910

Thesis Part A

School of Computer Science and Engineering
UOC3 HPW5

Prerequisite: 126 units of credit, and enrolment in Bioinformatics program 3647, 3755, 3756, or 3715.

Thesis part A and B are done in the last two semesters of the Bioinformatics degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second session are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BINF4911

Thesis Part B

School of Computer Science and Engineering
UOC12 HPW5

Prerequisite: BINF4910.

Thesis part A and B are done in the last two semesters of the Bioinformatics degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BINF4920

Professional Issues and Ethics for Bioinformatics

School of Computer Science and Engineering
UOC3 HPW3

Prerequisite: Enrolment in Bioinformatics program 3647, 3715, 3755, 3756, 3757.

his course will develop a framework on which professional and ethical issues for Bioinformatics can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page www.bioinformatics.unsw.edu.au/course/

BIOC2101

Principles of Biochemistry (Advanced)

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC1221, BIOC1319, BIOC2181, GENB1002, GENS6012

Introduces modern biochemistry, covers fundamental aspects of the structure-function relationships of proteins and an overall coverage of intermediary metabolism. Major topics covered include: the nature and function of proteins and enzymes; the metabolic working of cells, tissues and organs; the interrelationships between the pathways of carbohydrate, lipid and amino acid metabolism; the vital role of hormones in metabolic regulation; the energy-trapping mechanisms of animals and plants; interesting variations on the central metabolic pathways in various life forms. Practical work to complement the lectures and to introduce the principles of biochemical analysis.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective part of their program.

BIOC2181

Fundamentals of Biochemistry

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC1221, BIOC1319, BIOC2101, GENS6012, GENB1002

Introduces modern biochemistry, covers fundamental aspects of the structure-function relationships of proteins and an overall coverage of intermediary metabolism. Major topics covered include: the nature and functions of enzymes; the metabolic working of cells, tissues and organs; the interrelationships between pathways of carbohydrate, lipid and amino acid metabolism; the vital roles of enzymes and hormones in catalysis and metabolic regulation; the energy trapping mechanisms of animals and plants; interesting variations on the central metabolic pathways in various life forms. Practical work to complement the lectures and to introduce the principles of biochemical analysis. This course covers essentially the same material as in BIOC2101 Principles of Biochemistry (Advanced), but in less detail and with more emphasis on the function of organisms and less emphasis on some of the underlying chemical mechanisms.

Note: This course provides a comprehensive introduction to Biochemistry as an alternative to BIOC2101 for students who do not intend to proceed to Level III Biochemistry. It does not fulfill the prerequisite requirements for Level III Biochemistry but the Head of School may give approval for students with a grade of credit to enrol in Level III courses.

BIOC2201**Principles of Molecular Biology (Advanced)**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC2291, GENB1001, GENS6011

Provides an introduction to modern molecular biology and covers the molecular mechanisms of gene expression and the fundamental aspects of recombinant DNA technology. The major topics covered include: The structure and function of DNA and RNA; the replication and transcription of DNA; translation of the genetic code into an amino acid sequence during protein synthesis; regulation of gene expression; manipulation of DNA including fragmentation by restriction enzymes, cloning of DNA fragments into vectors, hybridization analysis and principles of DNA sequencing; protein structure and function, protein engineering and site-directed mutagenesis; amplification of DNA by the polymerase chain reaction (PCR). Practical work to complement the lectures.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions only apply to students taking this course as an elective part of their plan.

BIOC2291**Fundamentals of Molecular Biology**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC2201, GENB1001, GENS6011

Provides an introduction to modern molecular biology and covers the molecular mechanisms of gene expression and the fundamental aspects of recombinant DNA technology. The major topics covered include: the structure and function of DNA and RNA; the replication and transcription of DNA; translation of the genetic code into an amino acid sequence during protein synthesis; regulation of gene expression. Manipulation of DNA including: fragmentation by restriction enzymes; cloning of DNA fragments into vectors; hybridization analysis and principles of DNA sequencing. Protein structure and function. Amplification of DNA by the polymerase chain reaction (PCR). Practical work to complement the lectures. This course covers essentially the same material as in BIOC2201 Principles of Molecular Biology (Advanced), but in less detail and with more emphasis on the general applications and less emphasis on some of the underlying mechanisms.

Note: This course provides a comprehensive introduction to Molecular Biology as an alternative to BIOC2201 for students who do not intend to proceed to Level III Biochemistry. It does not fulfill the prerequisite requirements for Level III Biochemistry but the Head of School may give approval for students with a grade of credit to enrol in Level III courses.

BIOC3111**Molecular Biology of Proteins**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisites: BIOC2101 or LIFE2101, BIOC2201

Modern aspects of the structure function relationships of proteins including discussion of the latest techniques of protein characterisation. Topics include: separation and analytical procedures; determination of amino acid sequence data; the nature of protein and protein ligand interactions including aspects of substrate binding, enzyme kinetics and enzyme mechanisms; the molecular architecture of proteins from the standpoint of the relationships among primary, secondary, tertiary and quaternary structures; aspects of protein engineering. Practical work illustrates and complements the lectures and provides experience with modern techniques of protein molecular biology.

BIOC3121**Molecular Biology of Nucleic Acids**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101 or LIFE2101, BIOC2201; Excluded: BIOC3621.

Detailed analysis of gene structure and function including: structure and properties of polynucleotides such as DNA and RNA; structure of chromatin; regulation of gene replication, transcription and translation; recombinant DNA technology, nucleic acid sequencing, DNA-DNA and DNA-RNA hybridisation as important tools of modern molecular biology. Practical work illustrates and complements the lectures and provides experience with contemporary molecular techniques.

BIOC3151**Human Genetics and Variation**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS2021 or BIOS2621

This course develops a student's abilities to use molecular and more traditional data to solve genetic problems that arise in a variety of applications, particularly in the area of human biology. Our genes interact with one another and with the environment to make us what we are. This course presents modern and historical methods for investigating the molecular basis of heritable characteristics from those for appearance to behaviour and disease. Areas of current research and molecular and statistical methods of analysis are explored. Issues such as race, development, genetics of cancer, quantitative traits, genetic disease, gene mapping ethics, eugenics and forensics are also addressed. Lectures are reinforced with discussion groups and computer and other exercises.

BIOC3261**Human Biochemistry**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101, BIOC2201

Covers the aspects of metabolism that are of particular relevance to the human. The major topics covered will be selected from: nutrition, exercise, neurochemistry, xenobiotics, nucleotide and one-carbon metabolism, genetic diseases and molecular aspects of parasitology; the role of triglyceride, cholesterol and lipoprotein metabolism in human health, and other selected areas of human nutrition; specialised aspects of endocrinology and neurochemistry including prostaglandins, leukotrienes, enkephalins and endorphins; the interrelation of purines, pyrimidines, folate and cobalamin metabolism in humans; Xenobiotics: the metabolism of foreign compounds by humans; biochemical aspects of genetic disease including the use of recombinant DNA techniques for prenatal diagnosis and carrier detection; molecular studies of malaria and other parasites of the human; the biochemistry of diabetes; molecular aspects of cancer and its treatment. Practical work amplifies the lectures.

BIOC3271**Molecular Cell Biology**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3671.

Cell biology from a molecular viewpoint; biochemical aspects of cellular organisation; the arrangement of the component molecules of organelles, their function in integrated cellular metabolism and the molecular interactions between the cells of multicellular organisms; the biochemistry of the cytoskeleton, carriers and intracellular transport systems; the regulation of cellular processes at the molecular endocrine level; growth differentiation and development; aspects of cancer metabolism, the biochemistry of cell to cell communication and the structure and function of the extracellular matrix. Practical work amplifies the lectures.

BIOC3281**Recombinant DNA Techniques and Eukaryotic Molecular Biology**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC3121 or BIOC3621

The organisation of the genomes of higher organisms derived mainly from the application of recombinant DNA technology and related techniques. Methods used for the isolation, identification and characterisation of eukaryotic genomes in terms of the organisation of single copy and repeated sequences and of coding and non-coding sequences and of several gene clusters, e.g. the alpha and beta globin gene cluster. Mechanisms known to operate in the control of eukaryotic gene expression, both at the DNA level and at the level of RNA processing. Review of several specialised genetic systems in plants and animals such as mitochondria, chloroplasts and RNA and DNA tumour viruses.

Practical work provides training in the use of sterile techniques and in working with polynucleotides under nuclease-free conditions, using basic techniques such as hybridisation and DNA sequencing.

BIOC3291**Genes, Genomes and Evolution**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS2021 or BIOS2621

Current concepts and theories in genetics concentrating on eukaryotes including humans; the generation of variation examined at the molecular level for fundamental genetic processes of mutation, recombination and repair; the evolution of the genome, maintenance of variation, the effects of mutations and their relevance to disease; use of comparative genomics to study genome evolution; genetics of cellular division process and developmental genetics; genetics of non-Mendelian characteristics - inheritance of mitochondrial types, imprinting, epigenetics; practical uses of genetics including the use of transposable elements; ecological genetics - natural and sexual selection, population structure; genetics of speciation, molecular evolution and phylogenetics; perspectives on genetics, history and future. Computer exercises and discussion groups to complement the lectures and introduce controversial topics in genetics.

BIOC3301

Biochemistry Laboratory Project (Advanced)

School of Biotechnology and Biomolecular Science
UOC6

The course involves directed reading, laboratory work and use of World Wide Web resources. Students will work on a research project under the supervision of a member of the academic staff. It is designed to introduce students to research methodology, and to stimulate critical and lateral thinking in the context of problem solving. Enrolment in this course is by invitation and is based on academic performance. Interested students should contact the Head of School.

Note: This course is restricted to Advanced Science students enrolled in Biochemistry, Genetics or Molecular Biology Plans.

BIOC3621

Molecular Biology of Nucleic Acids (Advanced)

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3121. Restricted to Advanced Science programs (3985, 3990, 3972, 3973, 3986, 3931, 3936)

This advanced course is designed to suit students who plan to pursue research careers in molecular biology or related disciplines. The syllabus is an enhanced version of that for BIOC3121 and comprises a detailed analysis of gene structure and function which includes: structure and properties of polynucleotides such as DNA and RNA; structure of chromatin; mechanisms and regulation of gene replication, transcription and translation, DNA repair and the molecular biology of cancer induction; recombinant DNA technology; nucleic acid sequencing, DNA-DNA and DNA-RNA hybridisations important tools of modern molecular biology; protein production using recombinant DNA system. Practical work provides extensive experience with contemporary molecular techniques; literature surveys and web-based research are also used to enhance the theoretical and practical aspects of the syllabus.

BIOC3671

Molecular Cell Biology (Advanced)

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3271. Restricted to Advanced Science programs (3985, 3990, 3972, 3973, 3986, 3931, 3936)

A molecular approach to understanding the complex, dynamic interactions that comprise cellular function. Concepts drawn from biochemistry, genetics and molecular biology together with classical cell biology will be integrated to produce a contemporary interpretation of cellular life. Topics to be covered include the structure and function of the cell: membranes, organelles and cytoskeleton; communication within and between cells; the regulation of cell cycling and the differentiation of cells from single cell to whole organism. The theoretical coverage will be extended by the addition of self-paced exercises which will require the students to survey the latest developments in this area. Practical work illustrates and complements the lectures, provides extensive experience with contemporary molecular cell techniques and will be enhanced by the inclusion of leading-edge technologies. This advanced course is designed to suit students who plan to pursue research careers in molecular cell biology or related disciplines.

BIOC4103

Genetics 4 Honours Full-Time

School of Biotechnology and Biomolecular Science
UOC24

BIOC4109

Genetics Honours (PT)

School of Biotechnology and Biomolecular Science
UOC12

BIOC4318

Biochemistry 4 Honours Full-Time

School of Biotechnology and Biomolecular Science
UOC24

Advanced training in selected areas of biochemistry including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

BIOC4428

Molecular Biology 4 Honours Full-Time

School of Biotechnology and Biomolecular Science
UOC24

Advanced training in selected areas of molecular biology including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

BIOM1001

Professional Biomedical Studies

Graduate School of Biomedical Engineering
UOC3 HPW2

Provides an introduction to biomedical engineering; examines the range of professional engineering activities; highlights ethical considerations associated with clinical applications; and develops skill in oral, written and graphical communication.

BIOM2010

Biomedical Engineering Practice

Graduate School of Biomedical Engineering
UOC3 HPW2

Introduction to clinical situations in hospitals. Presentation of guest lectures by eminent people working in the field. Lecture topics include cardiology, neurology, orthopaedics, and rehabilitation.

BIOM5000

Thesis A

Graduate School of Biomedical Engineering
UOC3 HPW6

For BE(Mech)/MBiomedE students only. To be taken in the year of completing the BE(Mech)/MBiomedE degree course.

BIOM5002

Thesis Part B

Graduate School of Biomedical Engineering
UOC9

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM5904

Thesis Part B (SENG)

Graduate School of Biomedical Engineering
UOC12 HPW12

Thesis for students enrolled in BE (SENG)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM5909

Thesis Part A (SENG)

Graduate School of Biomedical Engineering
UOC3

Thesis for students enrolled in BE (SENG)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM5910

Thesis Part A

Graduate School of Biomedical Engineering
UOC6 HPW8

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5911**Thesis Part B**

Graduate School of Biomedical Engineering
UOC6 HPW8

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5920**Thesis A**

Graduate School of Biomedical Engineering
UOC3 HPW7

Prerequisite: Enrolment in Program 3728; Excluded: BINF4910, COMP4910, SENG4910.

Thesis for students enrolled in BE (COMP)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM5921**Thesis B**

Graduate School of Biomedical Engineering
UOC15 HPW14

Prerequisite: BIOM5920.

Thesis for students enrolled in BE (COMP)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM5930**Research Project A**

Graduate School of Biomedical Engineering
UOC6

Thesis topic for BE(Chem)/MBiomedE students only.

BIOM5931**Research Project B**

Graduate School of Biomedical Engineering
UOC9

Thesis topic for BE(Comp)/MBiomedE students only.

BIOM5940**Thesis Part A (BINF)**

Graduate School of Biomedical Engineering
UOC3

Thesis for students enrolled in BE (BINF)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM5941**Thesis Part B (BINF)**

Graduate School of Biomedical Engineering
UOC12

Thesis for students enrolled in BE (BINF)/MBiomedE only.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

BIOM9012**Biomedical Statistics**

Graduate School of Biomedical Engineering
UOC6 HPW3

Probability and distributions. Estimation and hypothesis testing. Associations between disease and risk factors. Linear models; analysis of variance, simple and multiple regression, discriminant analysis. Distribution-free methods. Analysis of survival data. Experiment design.

BIOM9021**Research Project B**

Graduate School of Biomedical Engineering
UOC6

This is the second part of the research project when taken over two semesters, BIOM5920 being the first part.

Projects are undertaken at the Graduate School of Biomedical Engineering or other relevant institutions towards the end of a student's program. Topics are chosen in collaboration with a supervisor from the Graduate School.

BIOM9027**Medical Imaging**

Graduate School of Biomedical Engineering
UOC6 HPW3

Fundamentals of producing a medical image, image collection techniques, image reconstruction algorithms. Detailed examination of the four main

areas of medical imaging: Nuclear Medicine and Positron Emission Tomography, Ultrasound, Diagnostic Radiology, Magnetic Resonance. Clinical application of each area.

BIOM9060**Biomedical Systems Analysis**

Graduate School of Biomedical Engineering
UOC6 HPW3

Analysis of compartmental systems in biology and medicine. Applications include pharmacology, physiology and nuclear medicine. Topics include the mathematics of linear compartmental systems, non-linear systems, tracer methods, parameter estimation by fitting models to data, the optimum design of experiments, and methods of control.

Note: Mathematics background required.

BIOM9311**Mass Transfer in Medicine**

Graduate School of Biomedical Engineering
UOC6 HPW3

Mass transfer in the living organism and in extracorporeal medical devices. Principles of diffusion and convection. Models of gas transfer in the lung. Transfer of solutes at the capillary level. Haemodialysis, haemofiltration, plasma filtration and blood oxygenators. Transfer across the peritoneal membrane-dialysis or drug delivery. Drug delivery across the skin.

BIOM9321**Physiological Fluid Mechanics**

Graduate School of Biomedical Engineering
UOC6 HPW3

Fluid mechanics of unsteady flow. Fundamentals of biological fluid flow by way of the governing equations. Kinematics and dynamics, viscous and inertial flow, boundary layers, separation, physiological flows (cardiac, vascular, pulmonary, urinary, etc.) and flow in artificial organs. Emphasis on physical rather than mathematical understanding of the relevant phenomena, to allow realistic appraisal of the nature of flow in a given organ.

BIOM9332**Biocompatibility**

Graduate School of Biomedical Engineering
UOC6 HPW3

Interaction of biological fluids and cells with foreign surfaces, in vitro tests to assess biocompatibility and thrombogenicity, current status of biocompatible materials as applied to extracorporeal systems, surgical implants and prosthetic devices.

Students should note that this course will be offered in S1 from 2004.

BIOM9333**Cellular and Tissue Engineering**

Graduate School of Biomedical Engineering
UOC6 HPW3

This course outlines concepts underlying development of cell-based products and aims to give students a theoretical and practical understanding of the tools available for producing such "devices" as well as the biological, physical and chemical constraints of these systems. Specific topics that will be covered include introductory cell biology and biochemistry, cellular mechanics, mass transfer in cells and tissue, analysis of cell and tissue functions, regulatory requirements for biological products and tissue engineering applications. Laboratory classes will be used to allow students to gain some practical experience with cell and scaffold manipulations.

BIOM9410**Regulatory Requirements of Biomedical Technology**

Graduate School of Biomedical Engineering
UOC6 HPW3

The regulatory requirements of medical devices in Australia, Japan, North America and Europe will be reviewed. Data collation and documentation methods are examined, case studies of medical device registration will be presented.

Students should note that this course is web-based.

BIOM9420**Clinical Laboratory Science**

Graduate School of Biomedical Engineering
UOC6 HPW3

The technologies, tests and operation of a variety of clinical laboratory testing systems (biochemistry, haematology, immunology, histology). Engineering solutions to physiological problems, chemical and biochemical assays.

BIOM9430

Electromedical Standards

Graduate School of Biomedical Engineering
UOC6 HPW3

Basic effects of electricity on the human body, threshold of ventricular fibrillation, termination of leakage currents, statistical basis of experimental data used to define limits of leakage currents. Formation of safety standards for electromedical equipment. Mechanisms of approval of electromedical equipment. Acceptance testing procedures. Certification schemes for electromedical equipment. National and international legal requirements.

BIOM9432

Chemistry and Physics of Synthetic and Biological Polymers

Graduate School of Biomedical Engineering
UOC6 HPW3

This course outlines the chemistry and physics of synthetic and natural polymers. It is an introductory level offering that covers polymerisation, synthesis of branched macromolecules and networks and polymer behaviour in solution and solid state. It also covers biological polymers. This includes synthesis and characterisation of biological polymers using proteins, polysaccharides and DNA as examples.

BIOM9440

Biomedical Practical Measurement

Graduate School of Biomedical Engineering
UOC6 HPW3

Hands-on practice in the use and testing of medical transducers and electromedical equipment in common use in hospitals and research laboratories to make measurements of biomedical variables of clinical significance.

Note: Limited number of places - contact School Office.

BIOM9450

Clinical Information Systems

Graduate School of Biomedical Engineering
UOC6 HPW3

An introduction to medical informatics and information systems, evidence-based medicine and clinical decision support. Aspects of database design, normalisation and structured query language (SQL). A previous knowledge of Java is necessary.

Note: Limited number of places - contact School Office.

BIOM9501

Computing for Biomedical Engineers

Graduate School of Biomedical Engineering
UOC6 HPW3

Algorithm design and documentation; programming in Java and in JBuilder; object oriented program design; event driven programming in a graphical environment.

Note: Highly recommended for Strand B students. This course is for students with little or no computing experience or for those students who wish to learn about object oriented programming in a Windows environment.

BIOM9510

Introductory Biomechanics

Graduate School of Biomedical Engineering
UOC6 HPW3

The principles of the mechanics of solid bodies, force systems, kinematics and kinetics of rigid bodies, stress-strain relationships, stress analysis of simple elements application to musculoskeletal system.

BIOM9541

Mechanics of the Human Body

Graduate School of Biomedical Engineering
UOC6 HPW2

Statics and dynamics of the musculoskeletal system: mathematical modelling and computer simulation, analysis of pathological situations.

Assumed Knowledge: BIOM9510 and ANAT2111.

BIOM9551

Biomechanics of Physical Rehabilitation

Graduate School of Biomedical Engineering
UOC6 HPW2

The application of biomechanics principles to the areas of performance testing and assessment, physical therapy, design of rehabilitation equipment, design of internal and external prostheses and orthoses.

Note: This course is not offered on a regular basis.

Assumed Knowledge: BIOM9541.

BIOM9561

Mechanical Properties of Biomaterials

Graduate School of Biomedical Engineering
UOC6 HPW3

The physical properties of materials having significance to biomedical engineering; human tissues; skin; soft tissues; bone; metals; polymers and ceramics. The effects of degradation and corrosion.

BIOM9601

Biomedical Applications of Microcomputers 1

Graduate School of Biomedical Engineering
UOC6 HPW3

Microcomputer architecture; physiological data acquisition systems: input/output signals and devices; assembly language programming; interfacing to higher level languages; the numeric data coprocessor; interrupts; graphics; practical sessions on use of Debug, Assembler, familiarisation with interrupt vector table and I/O ports. Major assignment on specific biomedical application (eg. bedside ECG monitor).

Note: A reasonably advanced background in microprocessors is required. Entry to course is by interview.

Assumed Knowledge: BIOM9040 and BIOM9050 or equivalents.

BIOM9613

Medical Instrumentation

Graduate School of Biomedical Engineering
UOC6

A critical comparative analysis of the theoretical physics and practical applications of medical transducers and electromedical equipment in common use in hospitals and research laboratories. How to choose a measurement device for a given situation.

BIOM9621

Biological Signal Analysis

Graduate School of Biomedical Engineering
UOC6 HPW3

Use of digital computers to extract information from biological signals. Signal processing using filtering, averaging, curve-fitting and related techniques, and analysis using model simulations, correlation, spectral analysis etc.

Note: Basic electronics and mathematics background required.

BIOM9701

Dynamics of the Cardiovascular System

Graduate School of Biomedical Engineering
UOC6 HPW3

Structure of the heart; organisation of the mammalian vasculature; mechanical, electrical and metabolic aspects of cardiac pumping; the solid and fluid mechanics of blood vessels; rheology of blood.

Note: Some mathematics background desirable.

BIOM9913

Project Report

Graduate School of Biomedical Engineering
UOC12

Projects are undertaken at the Graduate School or other relevant institutions towards the end of the program. Topics are chosen in collaboration with a supervisor from the Graduate School.

BIOM9914

Masters Project

Graduate School of Biomedical Engineering
UOC12

This is a 12 UOC one session research project replacing BIOM 9913. If you wish to do a 12 UOC project extending over two sessions, please enrol in BIOM 9020 and BIOM 9021.

Projects are undertaken at the Graduate School of Biomedical Engineering or other relevant institutions towards the end of a student's program. Topics are chosen in collaboration with a supervisor from the Graduate School.

Note: Course offered subject to approval.

BIOS1101

Evolutionary and Functional Biology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The course examines the evolutionary history of life on earth from origins to humans and the relationship between environment, adaptation and function. Animal (particularly human) and plant physiology are covered with an emphasis placed on adaptation in the Australian context.

Note: Laboratories commence in Week 1

BIOS1201

Molecules, Cells and Genes

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The course is concerned with the basic characteristics of all life. The chemistry of life is covered with emphasis on the ways in which living things construct and break down macromolecules. The way in which the genetic code controls these processes depends to a great extent on the structure and function of cell components, and cell biology is a major component of the course. The final topic is genetics - the way in which the genetic code is inherited and the ways in which it can be modified.

Assumed knowledge: HSC Exam Score: Physics 53-100, or Chemistry 53-100, or Earth and Environmental Science 53-100, or Biology 53-100.

Notes: Assumed knowledge for BIOS1201 is minimal. If you believe that your academic background is not appropriate, but would like to do Biology, please consult the Director.

Laboratories commence in Week 1.

BIOS1301

Ecology, sustainability and environmental science

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

This course provides an introduction to ecology, sustainability and environmental science, introducing a range of biological topics and how scientists approach these topics to solve problems. The course develops student skills in critically assessing scientific information, routinely debated by the public and decision-makers. It provides a strong grounding in today's and tomorrow's environmental problems and the role of science in providing solutions.

Assumed knowledge: HSC Exam Scores: Biology 53-100; Chemistry 53-100; Earth and Environmental Sciences 53-100 or Physics 53-100 or 3 Unit Science 90-150, or 4 Unit Science 1-50.

Note: Costs may be incurred for fieldwork. Students should consult the School of Biological, Earth and Environmental Sciences (BEES) website for laboratory registration details.

BIOS2011

Evolutionary and Physiological Ecology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Introduction to functional relationships between living organisms and the environments in which they live. Emphasis on interactions within and between populations, ecological energetics, ecophysiology, and the theory of evolution by natural selection. Plants, animals and microbes are covered. Also serves as an introduction to the process of scientific enquiry.

Assumed knowledge: BIOS1101 and BIOS1201

BIOS2021

Genetics

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Excluded: BIOS2621

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenetics; genetic transmission, mutation, recombination; gene regulation, interaction and development; genetic variation and evolution of molecules, populations and species: mating, selection, migration, population size, mutation, environment; applications, including to humans and genetic engineering.

Assumed knowledge: BIOS1101 and BIOS1201 or CHEM1011

BIOS2031

Biology of Invertebrates

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

A study of invertebrate diversity emphasising their evolution, morphology, behaviour, and relationships to marine, freshwater and terrestrial environments. Invertebrate conservation and applied aspects of invertebrate biology are included. Practical work includes examining living and preserved specimens (including dissections) in the laboratory and the field, and techniques for invertebrate identification.

Assumed knowledge: BIOS1101 and BIOS1201.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective. There is a compulsory field camp during the mid session break and personal expenses will be incurred.

BIOS2051

Flowering Plants

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Basic plant biology including cell structure, plant morphology and anatomy, water and sugar transport, seed structure and germination, plant growth and development, leaves and photosynthesis, roots, micro-organisms and nutrition, evolution of land plants and plant taxonomy. A strong emphasis is placed on Australian native flora. Practical work includes light microscopy; plant anatomy and identification.

Assumed knowledge: BIOS1101 and BIOS1201

BIOS2061

Vertebrate Zoology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Australia has a high diversity of vertebrate species (e.g. platypus, tree frogs, parrots, snakes). This course examines the evolution, diversity and natural history of these animals with a special emphasis on how they cope with Australia's environment. It covers the evolutionary origins and relationships between the major Vertebrate groups and explores their diversity of form, function and behavior. There is a detailed investigation of birds and mammals, particularly their ecology, life history and emerging conservation issues. Practical work involves examining living and preserved specimens (including dissections) and several field trips around Sydney studying vertebrates in the wild.

BIOS2621

Genetics (Advanced Level)

School of Biological, Earth and Environmental Sciences
UOC6 HPW6

Excluded: BIOS2021

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenetics. Genetic transmission, mutation, recombination. Gene regulation, interaction and development, genetic variation and evolution of molecules, populations and species. Mating, selection, migration, population size, mutation environment. Applications, including humans and genetic engineering. The Advanced Level course will involve additional projects, practicals and tutorials.

Assumed knowledge: BIOS1101, BIOS1201, CHEM1011

Note: Available to students in 3972/3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students.

BIOS3011

Animal Behaviour

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Theory and practice in the biological study of animal behaviour: ethology and behavioural ecology. The observation and description of behaviour along with the development, function and evolution of behaviour in an ecological context are examined as important elements in the analysis of behaviour, particularly social behaviour. Topics include sensory control systems, foraging behaviour, communication, home range, territorial behaviour, aggression and dominance, sexual behaviour, mate choice, mating systems, play and social organisation. Examples are drawn from the Australian fauna and both field and laboratory work are included.

Assumed Knowledge: Animal systematics and morphology with BIOS2031 or BIOS2061 recommended

BIOS3021

Comparative Animal Physiology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The physiology of invertebrates and vertebrates including the special features of Australian mammals. The topics examined include reproduction, hormones, nerves, blood, circulation, respiration and kidneys with emphasis on the control and integration of organ systems and body functions.

Assumed Knowledge: Animal systematics and morphology, with BIOS2031 or BIOS2061 recommended

BIOS3061

Plant Ecosystem Processes

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Interactions of plants with their soil and atmospheric environments. Plant growth and decomposition processes. Cycling of carbon, water and nutrients in plant ecosystems. Role of fungi in ecosystems. Mineral nutrition and water uptake in plants. Root systems. Plant strategies for improving mineral nutrition. The role of symbiosis in mineral nutrition. Impacts of global change on vegetation. Role of terrestrial ecosystems in the global carbon budget. Relating vegetation to climate.

Assumed Knowledge: BIOS2051

BIOS3071

Conservation Biology and Biodiversity

School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3671

Applications of community biology, population ecology and genetics to management of environmental problems in nature and artificial ecosystems, including Australian examples; nature and importance of global diversity; management and design of programs for the conservation of species and ecosystems, including reserves, off-site conservation, and computer simulations.

Assumed knowledge: BIOS1101 and BIOS1201

Note: Field excursions are compulsory and will involve expense to individual students.

BIOS3081

Ocean Biology and Fisheries

School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3681

Marine pelagic and estuarine habitats. The practical application of theory to the ocean environment and its effect on the life of marine organisms. Emphasis is on the biology of phytoplankton, zooplankton and fish, together with the study of fisheries. Includes management, marine technology, computer simulations, conservation, other marine vertebrates, aquaculture and environmental concerns. Technical skills, taxonomy and sampling design.

Assumed knowledge: BIOS2031 and BEES2041

Note: A compulsory field trip will be held during the mid-session break, and will involve personal expense to individual students.

BIOS3091

Marine and Aquatic Ecology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Ecology of marine and freshwater systems, emphasising benthic communities. Population and community dynamics of these systems. Evolution of life histories in the light of constraints of aquatic systems. Emphasis on experimental approaches to aquatic ecology. Special topics considered include chemical ecology, plant/herbivore ecology, and applied aspects of the topic such as mariculture. A section on the biology and taxonomy of marine algae (seaweeds) is included. Fieldwork is an important component of the course.

Assumed Knowledge: BIOS2011 or BEES2041

BIOS3111

Population and Community Ecology

School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3611

Factors regulating dynamics of interacting populations, renewable resource management, ecosystem stability, cycles and chaos, simulation modelling in ecology, niche theory, competition, habitat selection, community structure, species diversity, island biogeography, ecological gradients. Succession following disturbance (fire, mining, or logging). Practical work is essential and may involve a field component.

Assumed Knowledge: BIOS1101 and BIOS2011 and MATH1041 (or higher level of statistics)

BIOS3161

Life in Arid Lands

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Forty-four percent of Australia is desert and a further 37% is semi-arid grassland or shrub communities. These arid lands contribute much to our unique biodiversity. We examine the history of the formation of the Australian arid lands, their characteristics relative to other arid parts of the world, the evolutionary history of the flora and fauna, adaptations of plants and animals to arid environments, the major arid lands ecosystems and conservation of biodiversity. We apply biological knowledge to issues of land degradation, salinisation of soils, dryland farming, feral animal control and wildlife management for a sustainable future. A field trip to Western NSW is an essential part of the course and students will incur expenses.

Assumed knowledge: BIOS2051 and BIOS2031 or BIOS2061 or equivalent knowledge of the systematics and morphology of animals and plants.

Note: A compulsory field trip will be held during the mid-session break and personal expenses will be incurred.

BIOS3301

Population and Community Ecology for Environmental Engineers

School of Biological, Earth and Environmental Sciences
UOC3 HPW3

Factors regulating dynamics of interacting populations, renewable resource management, ecosystem stability, cycles and chaos, simulation modelling in ecology, niche theory, competition, habitat selection, community structure, species diversity. Plant and animal succession following disturbances such as fire, mining and logging. Rehabilitation and restoration procedures following disturbance. Appropriate tutorial topics.

Note: Restricted to Environmental Engineering Programs.

BIOS3601

Advanced Field Biology

School of Biological, Earth and Environmental Sciences
UOC6 HPW45

An advanced practical training in diversity, systematics, biology and identification of terrestrial animals and plants. The course is run principally as an intensive one (1) week course at Smiths Lake Field Station during the Easter break. Students will receive theoretical and practical training in current methods of trapping, collecting and identifying animals and plants, estimation of population size, biodiversity, the conduct of animal surveys, and data analyses. The course coverage will include both vertebrate and invertebrate animals and plants.

Assumed knowledge: BEES2041 and familiarity with principles of systematics

Note: Available to students in Advanced Science, with unfilled places available to students in Environmental Science, Biological Science and Ecology Majors with a credit average.

BIOS3671

Conservation Biology and Biodiversity (Advanced Level)

School of Biological, Earth and Environmental Sciences
UOC6 HPW6
Excluded: BIOS3071

Applications of community biology, population ecology and genetics to management of environmental problems in nature and artificial ecosystems, including Australian examples. Nature and importance of global diversity, management and design of programs for the conservation

of species and ecosystems, including reserves, off-site conservation, and computer simulations. Field excursions are compulsory and will involve expense to individual students. Current conservation issues will be addressed in small group projects.

Assumed knowledge: BIOS1101 and BIOS1201

Note: Available to students in 3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students.

BIOS3681

Ocean Biology and Fisheries (Advanced Level)

School of Biological, Earth and Environmental Sciences

UOC6 HPW6

Excluded: BIOS3081

Marine pelagic and estuarine habitats. The practical application of theory to the ocean environment and its effect on the life of marine organisms. Emphasis on the biology of phytoplankton, zooplankton and fish, together with the study of fisheries. Includes management, marine technology, computer simulations, conservation, other marine vertebrates, aquaculture and environmental concerns. Technical skills, taxonomy and sampling design. Personal expenses will be incurred. The Advanced Level has fewer laboratories, but includes a tutorial, use of specialised equipment, as well as a seminar series.

Assumed knowledge: BIOS2031, BEES2041

Note: Available to students in Advanced Science- Life Sciences and, subject to the availability of places, to students in BEnvironSci (Biology and Marine) and in 3970 (Biological Science, Ecology, and Biological Oceanography Majors with a credit average or better in BIOS courses). A compulsory field trip will be held during the mid-session break.

BIOS4514

Biological Science Honours B

School of Biological, Earth and Environmental Sciences

UOC24

A 24UOC research project in Biological Science, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4515

Biological Science Honours B

School of Biological, Earth and Environmental Sciences

UOC18

A 18UOC research project in Biological Science, to be taken in combination with BIOS4518, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4516

Biological Science Honours B

School of Biological, Earth and Environmental Sciences

UOC12

A 12UOC research project in Biological Science taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4518

Biological Science Honours B

School of Biological, Earth and Environmental Sciences

UOC6

A 6UOC research project in Biological Science, taken in each of four sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4515 or BIOS4516.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4524

Botany Honours B

School of Biological, Earth and Environmental Sciences

UOC24

A 24UOC research project in Botany, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4525

Botany Honours B

School of Biological, Earth and Environmental Sciences

UOC18

A 18UOC research project in Botany, to be taken in combination with BIOS4528, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4526

Botany Honours B

School of Biological, Earth and Environmental Sciences

UOC12

A 12UOC research project in Botany taken over two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4528

Botany Honours B

School of Biological, Earth and Environmental Sciences

UOC6

A 6UOC research project in Botany taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4525 or BIOS4526.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4534

Zoology Honours B

School of Biological, Earth and Environmental Sciences

UOC24

A 24UOC research project in Zoology, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4535

Zoology Honours B

School of Biological, Earth and Environmental Sciences

UOC18

A 18UOC research project in Zoology, to be taken in combination with BIOS4538, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4536

Zoology Honours B

School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Zoology taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4538

Zoology Honours B

School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Zoology taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4535 or BIOS4536.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4544

Ecology Honours B

School of Biological, Earth and Environmental Sciences
UOC24

A 24UOC research project in Ecology, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4545

Ecology Honours B

School of Biological, Earth and Environmental Sciences
UOC18

A 18UOC research project in Ecology, to be taken in combination with BIOS4548, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4546

Ecology Honours B

School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Ecology, taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4548

Ecology Honours B

School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Ecology, taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4545 or BIOS4546.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOT1011

Introductory Biotechnology

School of Biotechnology and Biomolecular Science
UOC6 HPW5

This course provides an overview of the impact of biotechnology in the achievement of contemporary objectives in the field of medicine, plant and animal science, and in food, marine and environmental sciences, and draws comparisons with conventional technologies. The concepts of bioethics, patenting and other regulatory issues are also introduced. The course is intended to cover the broad concept of biotechnology - its historical and contemporary relevance.

BIOT3011

Biotechnology A

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101 or LIFE2101, BIOC2201; Excluded: BIOT3611.

The basic principles involved in the operation of microbial processes on an industrial scale. Includes: the isolation of commercially useful organisms; the selection, maintenance and improvement of microorganisms using conventional and recombinant genetics; the influence of physical and chemical factors on the microbial environment; the control of environmental factors; extremophile biotechnology; the effects of operational patterns on batch and continuous flow cultivation; air and media sterilisation; the harvesting, purification and standardisation of products; the principles involved in microbial processes for chemical, pharmaceutical and food production. The laboratory component includes manipulation of industrially important microorganisms and isolation of novel microorganisms. Industrial and other invited speakers will cover issues related to animal and plant transgenics; the human genome project and medicine; advances in food biotechnology; and commercialization issues.

BIOT3021

Biotechnology B

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOT3011 or BIOT3611; Excluded: BIOT3621.

Application of principles of biotechnology to the analysis and design of microbial processes of industrial relevance (ethanol, single cell protein, fermented foods and beverages, amino acids and vitamins, microbial polysaccharides, microbial enzymes, secondary metabolites including antibiotics, recombinant proteins, products of mammalian cell culture, waste treatment processes, microbial leaching and metal recovery from low grade minerals). Emphasis on quantitative approach: mass and heat balance calculations, kinetic and thermodynamic analysis, equipment selection and specification, process modelling and application of optimisation techniques. The economics of microbial processes are considered, as well as a series of case studies on the technical and economic feasibility of modern biotechnology-based processes. Patent and regulatory issues are also reviewed.

Laboratory experiments, tutorials and a small design project complement the lecture program.

BIOT3061

Biopharmaceuticals

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisites: BIOC2101 or LIFE2101, BIOC2201

The human health care industry is entering an exciting new era, with a wide range of biopharmaceuticals now approved for human use. The sequencing of the human genome, the evolution of new methods for the

production of recombinant biopharmaceuticals, the ability to produce human antibodies and recent developments in gene therapy have seen biopharmaceutical discovery and production become a major global focus of research activity. The course is designed to give students a detailed insight into techniques in biopharmaceutical discovery, isolation and characterization. The practical work includes production of a model recombinant biopharmaceutical by cell culture, including downstream processing and characterization using modern techniques analytical biotechnology including mass spectrometry. On-line bioinformatics tutorials and assignments associated with model biopharmaceuticals are included in the practical program.

BIOT3071**Commercial Biotechnology**

School of Biotechnology and Biomolecular Science
UOC6 HPW4

Corequisite BIOT4053 (for program 3052 only), or prerequisite 48UOC for other programs.

This course covers aspects important to the commercialisation of biotechnology and related industries and includes: the definition, generation and protection of intellectual property (IP), issue and protection of patents in Australia and overseas, trademarks and copyright, role of confidentiality in protecting non-patentable IP; licencing arrangements and trading in IP. Innovation Management, planning and management of R&D programs, preparation and assessment of business plans. Sources of funding for biotechnology R&D, both corporate and government, establishment of business ventures, joint ventures and strategic alliances. Regulatory and legislative aspects of genetically modified organisms (GMOs) and environmental considerations and concerns, policies in Australia, USA and Europe regarding their use in agricultural, food and pharmaceutical industries. Introduction to the concepts of good manufacturing practice (GMP) for therapeutic goods; regulatory procedures for biotechnology derived therapeutics, process validation. Marketing, licencing and business studies.

BIOT3081**Environmental Biotechnology**

School of Biotechnology and Biomolecular Science
UOC6 HPW5

Prerequisite: 48 units of credit

This course discusses the commercial applications of bioprocesses to environmental problems. The principles of microbial sensing and adaption to extreme environments, as discussed in Environmental Microbiology (MICR3071), are expanded in the bioremediation of polluted environments and the recovery of important minerals and precious metals. Similarly, the application of microorganisms in other key environmental areas of biodeterioration, biomineralogy, biosensors, biofuels, biodegradable plastics, waste and water treatment and biocontrol are also discussed in this course.

BIOT3091**Professional Issues in Biotechnology**

School of Biotechnology and Biomolecular Science
UOC6 HPW4

Corequisite BIOT4053 (for program 3052 only), or prerequisite 48UOC for other programs.

This course builds on the framework provided in BIOT3071, Commercial Biotechnology, in providing material necessary for the commercialisation of biotechnology products and training students in professional issues important for their careers. The grounding in IP provided in BIOT3071 will be augmented with material and case studies which cover the developments in IP relevant to the biotech industry. Planning and control of R&D projects, project management. Review of the Australian biotech industry including analysis of sources of capital and comparisons with the situation existing in the USA. Specific treatment of the regulatory approval process for biopharmaceuticals, with specific material on GMP and process validation for r-DNA derived therapeutics and gene therapy products. The practical/tutorial component in the course will involve the students in small group as well as individual assignments, where presentations will be made to the class. Assignments will cover such areas as drafting of provisional and PCT patent applications; business plans for biotech companies; case studies analysing specific companies and products; requirements for regulatory approval. The course will be carried out in association with staff and conjoint appointments in the School as well as visiting lecturers.

BIOT3100**Fundamentals of Biotechnology**

School of Biotechnology and Biomolecular Science
UOC3 HPW2

This course introduces important fundamental principles of biotechnology including fermentation and biocatalysis, protein synthesis and engineering and recombinant DNA technology. The applications of these principles are then explored in a series of lectures focusing on environmental biotechnology, drug recovery and production, plant biotechnology, bioresources and the economics of bioprocesses. The course is designed to provide an understanding of the principles and applications of biotechnology both in its own and as alternatives to chemical synthesis.

Note: Restricted to programs 3055, 3100 and 3040.

BIOT3611**Biotechnology A (Advanced)**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101, BIOC2201; Excluded: BIOT3011

This course is available to Advance Science students or as an advanced option to students in other appropriate science programs. The advanced course differs to Biotechnology A (BIOT3011) by providing greater opportunities for self-directed learning, separate laboratory practicals, and for research planning under the guidance of mentors from the academic or research staff. The lecture component of the course differs from that in BIOT3011 in the number and content of lecture and laboratory exams.

The goal of the course is to build on the fundamentals acquired in previous courses and develop an understanding of the commercial applications of biological systems. The course will consider the principles involved in microbial processes for chemical, pharmaceutical and food production on a commercial scale. The lecture component will address the nature of the genetic tools used to optimise product formation; the influence of environmental factors on microbial productivity; biodiversity issues; bioprocesses; the nature of industrially important cell types from prokaryotic to higher eukaryotic cells; and the commercial and marketing issues inherent in biotechnological processes. Lectures are supplemented by industrial presentations. The laboratory component includes manipulation of industrially important microorganisms. The development of team skills in a critical review of current research areas is a feature of the course. The course is intended for students interested in the commercial and multidisciplinary perspectives of processes using microbial and other cell types.

BIOT3621**Biotechnology B (Advanced)**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOT3011 or BIOT3611; Excluded: BIOT3021

The course covers the bioprocessing and economic principles involved in the operation, development and design of large scale biotechnology-based processes. It includes analysis of fermentation kinetics, batch and continuous modes of operation, bioprocess optimisation, principles of fermentor scale up, downstream processing and bioprocess design as well as principles of economic feasibility analysis. Selected bioprocesses will be examined in detail, including ethanol from renewable resources, amino acid production, antibiotics, large scale manufacture of plasmid DNA, production of viral vectors for gene therapy and the manufacture of therapeutic recombinant proteins from bacterial, yeast and mammalian hosts. Laboratory sessions and case studies will supplement lecture material.

The advanced course in Biotechnology B will cover the same core material as Biotechnology B (BIOT3021), but will have a more extensive laboratory/research component integrated with a technical/ economic feasibility evaluation and business plan for a new recombinant product.

BIOT4053**Research Project - Biotechnology**

School of Biotechnology and Biomolecular Science
UOC18 HPW18

Prerequisite: 144 units of credit

The experimental investigation of some aspects of biotechnology.

Note: Restricted to programs 3052.

BIOT4073**Biotechnology Honours Full-Time**

School of Biotechnology and Biomolecular Science
UOC24

Advanced formal training in selected areas of biotechnology and participation in one of the School's research projects. Students will be required to attend and participate in the Graduate Seminar program. In addition, students may be required to undertake a reading list and/or essay, at the discretion of the school.

Note: Restricted to program 3990/3972.

BLDG1050

Structures 1

Building Construction Management Program
UOC6 HPW4

An introduction to structural appreciation; external and internal forces; free body diagrams; static force equilibrium for statically determinate structures; member forces in pin-jointed trusses; beam section properties; bending moment, shear force and deflection diagrams for beams; beam stresses in bending and shear; design of steel beams for bending, shear and deflection. Case studies to illustrate how structures of various types support vertical and lateral loads.

BLDG1121

Construction Science

Building Construction Management Program
UOC6 HPW4

Properties of materials; plasticity, elasticity, density, porosity, hardness. Optical, electrical, thermal and acoustic properties. Deterioration. Properties and manufacture of building materials; wood, wood products, bricks, fibre cement, ceramics, plastics, sealants and mastics, stones. Concrete technology: cement, aggregates, water and admixtures; properties of fresh concrete; strength considerations; durability, shrinkage and creep; special concretes; nondestructive testing; mix design. Metals in buildings: structural ferrous alloys; corrosion and protection; welding; types of failure, brittle fracture, fatigue, creep; impact resistance; tensile properties; hardness; strain hardening. Fire: behaviour of building materials and structures.

BLDG1211

Construction Technology 1A (Domestic Construction)

Building Construction Management Program
UOC6 HPW4

Introduction to the use of drawing instruments. Basic architectural drafting skills. Functional requirements and methods of building single storey family dwellings: brick, brick veneer and timber frame; domestic joinery; staircase construction; finishes; plumbing, drainage and electrical services; methods of setting out and supervision, on site observation and a report on house construction.

BLDG1212

Construction Technology 1B (Low Rise Residential)

Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1211.

Small multistorey buildings from the functional and construction operation viewpoints. Quality control and supervision. Basement, ground floor and upper floor construction; methods of roofing, waterproofing; joinery; internal finishes; minor construction plant, formwork. Construction drafting, onsite observation and report on home unit building.

BLDG1260

Construction Management 1 (Management Principles)

Building Construction Management Program
UOC6 HPW3

Library usage. Accessing information: reading, summarising, referencing, report writing and oral presentations. Organisation of and participation in meetings, seminars and lectures. Basic management principles, functions of management, scientific management, management objectives. Structure of the construction industry; benchmarking; total quality management; constructability; partnering and strategic alliance; re-engineering. Development process and statutory controls.

BLDG1281

Construction Law 1A

Building Construction Management Program
UOC3 HPW2

Law, including a brief outline of sources of law in New South Wales and the system of judicial precedent. General principles of law of contracts. Contractual rights and obligations. Court structures; Sale of goods; a general introduction to the law of bankruptcy. General principles of law of agency. Law of partnership.

BLDG1282

Construction Law 1B

Building Construction Management Program
UOC3 HPW2
Prerequisite: BLDG1281.

Commercial Law; Corporations; Trade Practices; Consumer Protection; Torts; Remedies; Succession; Local Government; Real Property; Administrative Law.

BLDG1302

Construction Economics

Building Construction Management Program
UOC6 HPW3

The economic structure and function of the building and construction industry, illustrated with examples. Macroeconomic policy and its impact on the building and construction industry. The role of the Australian economy in the world.

BLDG2052

Structures 2

Building Construction Management Program
UOC6 HPW4

Principles of structural design for strength, stability and serviceability; design of steel and concrete structures using limit state design; load transfer mechanisms and failure modes in beams and columns; design of beams and columns in steel; bolted joints and welded joints in steel frame; design of reinforced concrete beams and slabs for bending, shear and deflection; reinforcement in columns, footings and other elements; reinforcement detailing; concrete bond and anchorage; durability and concrete cover; case studies of structural failures.

BLDG2101

Construction Technology 2A (Framed Buildings)

Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1211, BLDG1212

Study of framed industrial buildings with emphasis on steel frames: framing systems including connection methods; roofing systems; cladding systems including precast concrete walling, metal and glass walling, masonry walling; flooring systems; building access and egress; fire requirements; environmental considerations; site establishment; on site observation and report on construction of industrial buildings.

BLDG2212

Construction Technology 2B (Building Services)

Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG2101, BLDG1212, BLDG1211

Hydraulic services pertaining to small and medium size projects; hot and cold water reticulation; sewer and storm water drainage; sanitary plumbing, introduction to fire fighting equipment and services; regulatory authorities and requirements. Ventilation theory; ventilation systems and equipment; refrigeration theory; air-conditioning equipment; electrical equipment; telephones and security; lifts and escalators; detection and fire protection; garbage and incinerators.

BLDG2280

Construction Management 2A (Occupational Psychology, Health and Safety)

Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1260.

History of Industrial Relations in Australia. Enterprise agreements. Restructuring Federal and New South Wales Government policies. State and Federal awards. EEO and OH&S. Proactive site safety management. Statutory safety requirements. Analysis of the operating environment of the construction enterprise; establishment of construction enterprise corporate objectives; development of construction sector corporate plans and strategies; construction enterprise organisation and structures.

BLDG2282

Construction Management 2B (People & Process Management)

Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1260.

Definition of Personnel Management and Human Resources Management. Stages in the development of human resources management. The leadership/management dialectic. Interpersonal skill development. Team building. Performance management and continuous improvement. Construction project management, concept and application. Role and functions of the project manager; management of all phases of construction projects. Construction strategy, planning and control. Project process management to reliably achieve the project goals; quality, waste, safety and progress management in design and construction including from a TQM perspective. Application of process management tools.

BLDG2332**Measurement & Documentation**

Building Construction Management Program

UOC6 HPW4

Prerequisite: BLDG1212.

Quantity surveying; historical background; functions of the quantity surveyor; introduction to the Australian Standard Method of Measurement of Building Works, its importance and application; methods of recording dimensions, checking and correlating plans and specifications; principles of measurement and billing; Bill of Quantities format; elementary billing and measurement of basic trades including finishes, brickwork, woodwork, roofing, concrete and groundwork.

BLDG2482**Computer Applications in Construction**

Building Construction Management Program

UOC3 HPW3

Prerequisite: BENV1141.

This course discusses computer applications for construction project management, and the creation and distribution of information within the building industry. It includes such topics as: networking and communication technologies; digital document formats and environments; spreadsheets; database systems; computer programs for project planning, cost estimating and cost management; shared project information databases; and CAD product modelling standards for interoperability with estimating and planning applications. This course involves practical use of spreadsheet, database, and project planning programs, with a focus on developing good skills with the Excel spreadsheet program.

BLDG3101**Construction Technology 3A (Tall Buildings)**

Building Construction Management Program

UOC6 HPW5

Prerequisite: BLDG2212, BLDG2101, BLDG1212, BLDG1211

Functional requirements and building techniques of tall buildings: foundation systems; structural systems including structural steel construction and reinforced concrete construction; enclosure systems including metal and glass cladding; ceiling and partition systems; various methods and materials commonly used to solve functional demands; comparison of systems of construction and their interrelationship; material handling and management including selection of cranes, hoists, and concrete pumps; principles of fire protection in tall building; on site observation and report on tall building construction.

BLDG3102**Construction Technology 3B (Techniques)**

Building Construction Management Program

UOC6 HPW5

Prerequisite: BLDG3101, BLDG2212, BLDG2101, BLDG1212, BLDG1211

Specialised construction techniques employed on major projects including the selection of plant, equipment and various construction systems: excavation; shoring; ground anchorage; underpinning; piling; formwork; craneage; material handling. Pre-stressed and pre-cast concrete construction. Construction methods with minimal impact on the environment; Building Code of Australia and code requirements; integration and coordination of services; demolition; site establishment; advanced construction techniques; basic geological considerations for building foundations; on-site studies and report.

BLDG3281**Construction Management 3A (Contracts)**

Building Construction Management Program

UOC6 HPW3

Prerequisite: BLDG1282.

Introduction to Contracts management. Project Life Cycle. Options for project delivery and contract price. Competitive tendering. Subcontracting. Analysis of standard forms of contract. Contract disputes, litigation, arbitration and mediation. Contract Insurance. Restitution. An introduction to the principles and application of Value Management and Facilities Management.

BLDG3284**Construction Management 3B (Planning & Control)**

Building Construction Management Program

UOC6 HPW3

Operation research techniques and their relevance to building, concept of planning and control, CPM, PERT, Line of Balance, Multi-activity Chart, computer applications of CPM. Principles and application of Work Study. Risk analysis, decision making process. An integrated project that draws together material covered in previous courses of the program. Simulation of construction conditions including technical, management, business and social aspects that have to be considered by the construction professional.

BLDG3301**Advanced Measurement & Documentation**

Building Construction Management Program

UOC6 HPW4

Prerequisite: BLDG2332.

Advanced billing and measurement of substructure, structure and services and preliminaries in accordance with the Australian Standard Method of Measurement. Introduction to computerised measurement and billing. Introduction to elemental cost planning.

BLDG3332**Construction Cost Estimating**

Building Construction Management Program

UOC6 HPW3

Prerequisite: BLDG2332.

Introduction to construction cost estimating including terminology, types of estimates and the tendering process. Analysis of material, plant and labour costs, and the estimation of selected unit rates; preliminaries, supplier and subcontract quotations, general and site overheads. Preliminary estimates. Preparation of contract variations.

BLDG3402**Research Skills**

Building Construction Management Program

UOC3 HPW2

An introduction to research methods, analytical techniques and presentation. Theories and philosophies of science and research. Research topics; collecting, generating and evaluating information. Structuring the study and presenting results. Probability: sample spaces and probabilities; probability trees; distribution of random variables; expected value and decision analysis. Statistics: mean, mode, median, standard deviation and variance; normal and binomial distributions; linear regression.

BLDG4275**Dispute Avoidance and Resolution**

Building Construction Management Program

UOC3 HPW2

Nature of claims, remedies, alternative dispute resolution, mediation, expert appraisal, litigation, moot arbitration.

BLDG4285**Professional Practice & Procedure**

Building Construction Management Program

UOC6 HPW3

Professional Institutes: Roles, Codes of Conduct; Fee Scales; Professional Indemnity Insurance; The Consultant/Client Agreement; Contract Administration: Variation Orders, Interim Payments and Final Accounts; Tax Depreciation Schedules; Office Management.

BLDG4304**Forecasting, Bidding & Cost Control**

Building Construction Management Program

UOC6 HPW3

Prerequisite: BLDG3301, BLDG3332.

Advanced estimating techniques, competitive tendering, contract cost adjustment; computer techniques applied to estimating. Practical exercises in the preparation of construction project tenders.

BLDG4305**Design Evaluation**

Building Construction Management Program

UOC6 HPW3

Prerequisite: BLDG3301, BLDG3332.

Cost Modelling; Accuracy in estimating; Area Rate Estimates; Functional Area Estimates; Cost Planning: typical cost plan, cost planning techniques, cost planning measurement and pricing; Feasibility Studies; Value Management. Cost planning practical exercise.

BLDG4315**Business & Financial Control**

Building Construction Management Program

UOC6 HPW3

Prerequisite: BLDG1302.

The business environment; business structures; taxation and depreciation; operating costs; economics of building plant and materials handling systems; financial control in the erection, management and demolition of buildings. Investment Analysis: demand for housing, demand for construction.

BLDG4492**Property Development and Valuation**

Building Construction Management Program

UOC3 HPW3

A total approach to the building process through the four stages of pre-design, design, construction and post-construction. Market research, establishing client's needs, site selection and analysis, feasibility studies and financing methods. General principles of valuation. Judicial valuation, legal precedent, land titles and rights. Depreciation assessment. Building maintenance cycles. Time value of money and equivalence. Methods and philosophies of determining market valuations. Preparation of development applications cost value analysis, value management LCC and services integration.

BLDG4501**Thesis Foundation**

Building Construction Management Program

UOC6

Prerequisite: BLDG3402.

This course is preparation for BLDG4502 Thesis and must be satisfactorily completed before enrolment in that course. Students are required to submit a developed thesis outline on an approved topic, including a full literature review and a justification of the proposed research methodology.

BLDG4502**Thesis**

Building Construction Management Program

UOC12

Prerequisite: BLDG4501.

Using the thesis outline developed in BLDG4501 Thesis Foundation, the preparation of a thesis that exhibits the following properties: a clearly stated aim or purpose, a review of relevant literature, and the adoption of an appropriate research method demonstrating analysis and synthesis with a justifiable conclusion. The thesis to have a clear structure and development and to be properly referenced with suitable bibliography.

BLDG9998**Quantity Surveying Industry Program**

Building Construction Management Program

UOC12

Students proposing to apply for membership in the A.I.Q.S., B.Q.S.M. or R.I.C.S. after graduation should enrol in this course rather than BLDG9999. It must be completed before the start of the final year of the program. The Quantity Surveying Industry Program is to be taken as a six months continuous employment with a professional Quantity Surveying firm or with a firm or building company where Quantity Surveying activities are undertaken. Students should be under the direct supervision of a corporate member of the Australian Institute of Quantity Surveyors or, where this is not possible, under the guidance of a mentor appointed by the Institute. Submission requirements are a daily diary, report and a completed form from the employer.

BLDG9999**Building Industry Program**

Building Construction Management Program

UOC12

Eighty days of approved building industry experience at any time to the start of the final year of the Program. Submission requirements are a weekly diary, report and a completed form from the employer.

CEIC0010**Mass Transfer and Material Balances**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CHEM1011 or CHEM1301, CHEM1201 or CVEN1531

Mechanisms and models of mass transfer at fixed and free interfaces. Diffusion. Convection. Adsorption. Phase equilibria. Calculation of mass transfer rates at surfaces with simple geometry. Mass transfer in dispersions. Applications of material balances to process calculations in chemical operations. Conventions in methods of analysis and measurement. Stoichiometry. Process calculations associated with gases and liquids. Problems involving bypass, recycle and purge. Differential material balances. Energy balances. Environmental engineering applications.

Note: Servicing Course ie. a course taught within courses offered by other Faculties.

CEIC0050**Atmospheric Process Chemistry**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CHEM1011 or CHEM1031, CHEM1201 or CVEN1531

Provides essential chemistry for understanding the processes which are responsible for air pollution. Composition and structure of the atmosphere. Natural gas chemistry. Free-radical gas-phase chemistry. Sources, transformation and sinks for atmospheric gases. Combustion processes. Smog chemistry. Radiochemistry. Biochemistry of toxic chemicals. Chemistry of polluting processes.

CEIC2011**Instrumental Analysis - Theory**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Data treatment, error analysis, sampling. Basic principles of volumetric analysis. Solubility and pH calculations. Electronic analysis: potentiometric, voltametric and coulometric. Spectrophotometric analysis: UV/visible, atomic emission, atomic absorption, X ray diffraction and fluorescence. Chromatographic analysis: gas chromatography, high performance liquid chromatography, and ion chromatography.

CEIC2012**Instrumental Analysis - Practical**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CEIC2011

Development of laboratory skills with a range of analytical instruments which includes: Selective ion electrode, polarography, potentiometric titrations, UV/Visible spectrophotometry, X-Ray Fluorescence and Diffraction, Gas and Ion chromatography.

CEIC2020**Introduction to Numerical Methods**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CEIC1020, MATH1231 or MATH1241, PHYS1169 or PHYS1111.

Computing for scientific and chemical engineering applications. Brief review of basic computer concepts. The Visual Basic language.

Applications in chemical engineering and industrial chemistry such as the solution of heat transfer and chemical reaction problems.

CEIC2110**Material & Energy Balances**

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CEIC1020

Solution strategies for material and energy balance problems. Material Balances: Component, elemental and differential material balances. Problems involving bypass, recycle, purge and chemical reaction. Energy Balances: Thermodynamic background: first law; general equation for open and closed systems; shaft work and enthalpy; reference states. Application of energy balances: enthalpy data including steam tables and psychometric charts; heat capacity data; phase change; mixing;

heat of solution; enthalpy-concentration diagrams; heats of formation, combustion and reaction. Integrated material and energy balance problems.

CEIC2120

Fluid Flow

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: CEIC1020, PHYS1169 or PHYS1111.

Dimensional Analysis. Fundamental concepts of Fluids. Simplification of the Navier-Stokes Equation. Fluid Statics. Integral Equations; continuity, Bernoulli's equation, momentum and energy equations. Flow in closed conduits, including laminar and turbulent flow and losses due to friction. Boundary layer theory. Measurement in Fluid mechanics; viscosity, pressure, velocity, flow rate. Pumps and pumping; blowers, compressors, pipes and fittings. Introduction to Boundary Layer Theory.

CEIC2130

Heat Transfer

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Introduction to various modes and mechanisms of heat transfer. Physical origins and rate equations. Conductivity. Diffusional heat transfer based on shell balances approach for one-dimensional steady state and transient transfer with heat generation and chemical reactions. Composite walls, contact resistance and extended surfaces. Introduction to heat exchangers; log-mean temperature difference, effectiveness - NTU methods.

CEIC3010

Reaction Engineering

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW3

Prerequisite: CEIC2110, (CHEN2061 OR INDC2040).

Introduction to reactor design: ideal batch, steady state mixed flow, steady state plug flow, size comparisons of ideal reactors, optimisation of operating conditions. Multiple reactor systems: reactors series and parallel, mixed flow reactors of different sizes in series, recycle reactors, autocatalytic reactions. Multiple reactions: reactor design for reaction in parallel and reactions in series, series-parallel reactions. Temperature effects: heat of reaction, equilibrium constants, optimum temperature progression, adiabatic and non-adiabatic operation, product distribution and temperature. Kinetics of rate processes: Significance of the rate laws and models for distributed and lumped parameter systems. Experimental measurement and correlation of process rates.

CEIC3070

Process Control

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: CEIC2011, CEIC2020, MATH2030

Concepts of process control, including: dynamic modelling of processes, linearization, Laplace transforms, transfer functions, open loop response of first and higher order systems, approximation by first order plus dead time models, concept of control for process regulation and safety, feedback control, block diagrams, PID controllers and tuning methods, closed loop response, stability analysis, single input-single output control loop design, cascade control, feed forward control, control valve characteristics and sizing, as well as introduction to some advanced control concepts. Process control laboratory experiments.

CEIC3110

Thermodynamics

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: CEIC2110, (CHEN2061 OR INDC2040).

Review of first law of thermodynamics; second law of thermodynamics. Auxiliary functions and conditions of equilibrium. Thermodynamic properties of fluids; thermodynamic properties of homogeneous mixtures. Chemical reaction equilibria; calculation of equilibrium compositions for single reactions. Phase equilibria; the phase rule, equilibrium. Engineering applications of thermodynamics. Heat engines, refrigeration.

CEIC4070

Laboratory Automation Science

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: CEIC3070

The application of computers, to real-time data acquisition and process control in chemical laboratories and selected processes of interest to industrial chemists. Introduction to real-time digital operations and data manipulation. Organisation of a process control computer. Hardware considerations. The process computer interface. Sequential and programmable logic control of batch processes. Data acquisition and process monitoring techniques. Digital process control PID controller tuning. Graphics in process monitoring and control. Direct Digital Control.

CEIC4095

Special Research Project Practice

School of Chemical Engineering and Industrial Chemistry
UOC9

ENROLMENT REQUIRES SCHOOL APPROVAL

The experimental investigation of some aspect of an elected topic area in Chemical Engineering

CEIC4096

Research Project Theory Extended

School of Chemical Engineering and Industrial Chemistry
UOC6

ENROLMENT REQUIRES SCHOOL APPROVAL

The experimental investigation of some aspect of an elected topic area in Industrial Chemistry/Chemical Engineering.

CEIC4101

Professional Electives Advanced

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6101 Advanced Reaction Engineering; CEIC6102 Advanced Process Control; CEIC6103 Advanced Particle and Separation Processes; CEIC6104 Advanced Polymers.

STUDENTS ENROL IN CEIC6*** NOT CEIC4101. Not all courses run at any one time.

CEIC4102

Professional Electives Extended

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4103

Professional Electives

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4104

Professional Electives

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS

ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4105

Professional Electives

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offering in: CEIC6101 Advanced Reaction Engineering; CEIC6102 Advanced Process Control; CEIC6104; Advanced Polymers; CEIC6206 Minerals Engineering - Practice; CEIC6207 Environmental Management 2B; CEIC6208 Business Management in Chemical Engineering B. STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4105. Not all subjects are offered at any one time.

CEIC4106

Professional Electives

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6206 Minerals Engineering - Practice; CEIC6209 Fuel & Energy 2; CEIC6210 Biochemical Processing 2; CEIC6207 Environmental Management 2B; CEIC6208 Business Management in Chemical Engineering B. STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4106. Not all courses are offered at any one time.

CEIC4110

Plant Management and Operation (3041 Program Students only)

School of Chemical Engineering and Industrial Chemistry
UOC4

Prerequisite: CEIC3010

A series of lectures designed to introduce the students to appropriate management techniques. Topics will include: business strategies, leadership, total quality management, safety management. Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the industrial training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and (4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial training objectives have been fulfilled.

The subject also includes SESC3310: This is an objective 5 subject which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions. The subject is taught by a combination of group activities, case studies, projects and seminars. The subject will cover four major topic areas, which are: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4120

Management and Plant Operation

School of Chemical Engineering and Industrial Chemistry
UOC6

Prerequisite: CEIC3010

A series of lectures designed to introduce the students to appropriate management techniques. Topics will include: business strategies, leadership, total quality management, safety management. Students will be required to operate a computer controlled chemical plant. Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the Industrial Training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and (4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial Training objectives have been fulfilled. The course also includes SESC3310, an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions. The course is taught by a combination of group activities,

case studies, projects and seminars. It will cover four major topic areas: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4130

Plant Operation (BE/MBio Med Program students only)

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: CEIC3010

Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the Industrial Training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and (4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial training objectives have been fulfilled. The course also includes SESC3310, an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions. The subject is taught by a combination of group activities, case studies, projects and seminars. The subject will cover four major topic areas: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4200

Industrial Experience

School of Chemical Engineering and Industrial Chemistry
UOC18

CEIC4201

Industrial Experience

School of Chemical Engineering and Industrial Chemistry
UOC18

CEIC6101

Advanced Reaction Engineering

School of Chemical Engineering and Industrial Chemistry
UOC3

This course covers in-depth considerations of the analysis and design of non-isothermal reactors, treatment of variable-density systems, non-catalytic gas-solid reactions (application to minerals processing, pharmaceuticals and microelectronic processing), kinetics of heterogeneous reactions, diffusion and reaction in porous crystals, design of fixed bed reactors, trickle-bed and slurry bed reactors.

CEIC6102

Advanced Process Control

School of Chemical Engineering and Industrial Chemistry
UOC3

Concepts of linear Multi-Input Multi-Output (MIMO) systems, state-space representation of process systems, linear spaces and linear operators, controllability and observability analysis, Lyapunov stability analysis, stability of interconnected systems, linear optimal control, frequency-domain analysis and controller synthesis for MIMO process systems. Introduction to model predictive control, system identification, robust control, decentralised control.

CEIC6103

Advanced Particle & Separation Process

School of Chemical Engineering and Industrial Chemistry
UOC3

The course covers lectures and demonstrations on: Particle characterisation and preparation using the latest techniques, floc characterisation and its relevance in separation techniques. There will also be relevant lectures on other aspects of separation technologies, theory and practice, novel applications to industry and environment management.

CEIC6104

Advanced Polymers

School of Chemical Engineering and Industrial Chemistry
UOC3

We will explore exciting macromolecular chemistry in a range of selected cutting edge research fields. The course is given by four experts in their

respective fields and has segments on reversible addition fragmentation chain transfer (RAFT) polymerization, atom transfer radical polymerization (ATRP), Ziegler-Natta Polymerization as well as the application of well-defined polymers for drug delivery and biomedical applications. The course is designed as an interactive discourse between students and lecturer. The students are actively engaged in judging current scientific research papers as well as developing new research strategies. If you are undertaking honours, Masters or PhD research in the field of polymer science, this course is highly recommended.

CEIC6201**Minerals Engineering**

School of Chemical Engineering and Industrial Chemistry
UOC3

Principles and applications of physical mineral processing, hydrometallurgy and electrometallurgy covering comminution, flotation, solid/liquid separation, dewatering, leaching, solvent extraction, purification and separation processes, electrowinning/refining and waste processing. Emphasis is placed on throughput and process calculations for the design of mineral processing plants.

CEIC6202**Biochemical Processing 1**

School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6203**Environmental Management 2A**

School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6204**Business Management in Chemical Engineering A**

School of Chemical Engineering and Industrial Chemistry
UOC3

The aims of this course are to introduce issues which affect business decisions encountered by management in the chemical industry. Topics include domestic and export markets, market growth, the learning effect and product life cycles. The distinction between issues and problems using PVC and the chlorine debate is discussed. Factors affecting plant life: scale up, retrofitting, competing technologies etc. Environmental and compliance issues including green chemistry. The petrochemical industry and in particular the polymer manufacturing industry is used to illustrate the main areas. Industry speakers and site visits are used to maintain relevance and topicality.

CEIC6205**Fuel & Energy 1**

School of Chemical Engineering and Industrial Chemistry
UOC3

Enrolment requires school approval

Current energy resources and alternatives for the future. Basic principles of fuel conversion processes: gasification, carbonisation, oil refining etc. Introduction to combustion of solid, liquid and gaseous (fossil) fuels.

CEIC6207**Environmental Management 2B**

School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6208**Business Management in CE B**

School of Chemical Engineering and Industrial Chemistry
UOC3

This course considers the skills required to manage world class manufacturing plants. Topics covered include: features of the world's best manufacturing plants; manufacturing as an integral part of the business; human resource management; reliability management; quality management systems; risk management; information technology management; supply and stock management; customer service; and, benchmarking.

CEIC6210**Biochemical Processing 2**

School of Chemical Engineering and Industrial Chemistry
UOC3

This subject will focus on pharmaceutical processing for chemical engineers and industrial chemists. Planned topics include an overview

of the pharmaceutical industry, process engineering in the pharmaceutical industry, good manufacturing practices, pharmacokinetics, regulatory aspects, clinical trials, drug delivery systems/formulations, occupational health and safety aspects in the industry, and marketing. This course may be supplemented by site visits and industry speakers.

CEIC6211**Polymer Chemistry for Chem Eng**

School of Chemical Engineering and Industrial Chemistry
UOC3

This subject is designed for chemical engineering students who wish to gain a general understanding of polymerization processes. Particular emphasis is given to free-radical (co)polymerization processes, their reactions, basic kinetics and industrial applications. The course will also address polymer characterization techniques ranging from chromatography to mass spectrometry. In addition, novel living methods of free-radical polymerization will be discussed. The material may be augmented with lab visits, demonstrations, and industry visits.

CHEM1000**Chemistry at the Cutting Edge**

School of Chemistry
UOC3 HPW2

Just what are the big issues in contemporary chemistry? This course takes an investigative approach to thinking about some of the challenging issues and frontiers in chemistry such as molecular machines, the chemical basis of memory, green chemistry, smart materials and the chemical origins of life.

Note: Restricted to Advanced Science students.

CHEM1011**Fundamentals of Chemistry 1A**

School of Chemistry
UOC6 HPW6

Excluded: CHEM1031

Elements, compounds and stoichiometry. Basic atomic structure and periodicity. Properties of gases. Thermodynamics (1st Law). Reactions classes. Equilibrium. Acids and bases. Behaviour of oxides, hydroxides, halides. Reactions of organic compounds. Chemical kinetics.

Assumed Knowledge: a basic knowledge of chemistry (equivalent to one year of high school chemistry)

CHEM1021**Fundamentals of Chemistry 1B**

School of Chemistry
UOC6 HPW6

Prerequisite: CHEM1011, Excluded: CHEM1041

Atomic and molecular structure. Properties of solutions. Solids and solubilities. Aqueous chemistry. Thermodynamics (2nd Law, entropy and free energy). Electrochemistry. Mechanisms in organic chemistry.

CHEM1031**Higher Chemistry 1C**

School of Chemistry
UOC6 HPW6

Excluded: CHEM1011

Atomic structure and periodicity. Structure and shapes of molecules. Chemical reactions, rates and mechanisms. Reactions of organic compounds. Includes advanced laboratory work.

Assumed knowledge: Equivalent to a good standard in high school chemistry (HSC 2 unit chemistry [75 - 100] or equivalent)

CHEM1041**Higher Chemistry 1D**

School of Chemistry
UOC6 HPW6

Prerequisite: CHEM1031, Excluded: CHEM1021

Properties of gases. Atmospheric chemistry. Properties of liquids and solids. Solubility and properties of solutions. Thermodynamics and equilibrium. Aqueous chemistry. Electrochemistry. Includes advanced laboratory work.

CHEM1819**Biological Chemistry for Optometry Students A**

School of Chemistry
UOC6 HPW6

Atomic structure and periodicity. Structure and shapes of molecules. States of matter. Thermodynamics - First and Second laws. Equilibrium; acid-base chemistry and solubility. Electrochemistry; redox chemistry. Chemical reactions, rates and mechanisms.

Assumed knowledge: A good knowledge of chemistry (corresponding to HSC 2Unit chemistry 65-100)

Note: Restricted to program 3950.

CHEM1829

Biological Chemistry for Optometry Students B

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1819

Carbon compounds and their reactions. Amino acids, proteins, carbohydrates, nucleic acids and lipids. Biological organic chemistry. Enzymology. Bioenergetics, Carbohydrate metabolism; oxidative phosphorylation. Metabolism and hormone function.

Note: Restricted to program 3950.

CHEM1831

Chemistry for Health, Exercise and Medical Science

School of Chemistry

UOC6 HPW6

Excluded: CHEM1031, CHEM1011, CHEM1819.

Designed for students in Health and Exercise Science and related areas, this course covers the chemistry required to understand atomic and molecular structure, states of matter, thermodynamics, equilibrium chemistry in aqueous solution and introductory kinetics, the chemistry of organic compounds, stereochemistry, functional groups and their reactions especially amines, amides, acids and esters, redox chemistry of oxygen. Case studies and experiments relevant to health and exercise science are also included. The chemistry in the course will prepare students for the Level II Biochemistry and Anatomy components of their programs.

Assumed knowledge: A basic knowledge of Chemistry equivalent to the NSW Year 11 Chemistry syllabus. It is also recommended that BIOS1201 be taken concurrently.

CHEM2011

Physical Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1021 or MATH1031 or MATH1231 or MATH1241.

First, second and third laws of thermodynamics. Applications of thermodynamics. Chemical and phase equilibria. Principles and applications of electrochemistry. Colloid, interface and surface chemistry. Reaction kinetics, temperature and concentration dependence of reaction rates, reaction mechanisms.

Note: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2021

Organic Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041

Applications of spectroscopy in structure elucidation. Reactive intermediates, addition and rearrangement reactions, carbonyl group chemistry. Chemistry of aromatic compounds.

CHEM2031

Inorganic Chemistry and Structure

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM 1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: CHEM2839, CHEM2828

Concepts and consequences of quantum theory. Electronic and geometric structure of atoms and molecules. Solid state chemistry. Coordination chemistry. Transition and post-transition metal chemistry. Chemistry of non-transition elements.

Note: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2041

Chemical and Spectroscopic Analysis

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1021 or MATH1031 or MATH1231 or MATH1241

Principles and applications of chemical and analytical spectroscopy. Statistical treatment of data. Titrimetric and potentiometric analysis. Separation techniques.

CHEM2718

Physical Chemistry for Materials Science and Engineering

School of Chemistry

UOC3

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1231 or MATH1241 or MATH1021; Excluded: CHEM2011, CHEM2818.

Thermodynamics; first, second and third laws. Chemical Equilibria. Electrochemistry, electrochemical cells. Chemical kinetics.

CHEM2828

Organic and Inorganic Chemistry for Nanotechnology

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041 Excluded: CHEM2021, CHEM2031, CHEM2839

Reactive intermediates, addition and rearrangement reactions, carbonyl group chemistry. Chemistry of aromatic compounds. Electronic and geometric structure of inorganic compounds. Coordination chemistry. Transition and non-transition metal chemistry

CHEM2839

Inorganic Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: CHEM2031, CHEM2828

Electronic structure of atoms and molecules structure, energetics and banding in the solid state. Principles of coordination chemistry. Occurrence, preparation, properties and reactions of selected compounds of transition and main group elements.

CHEM2921

Food Chemistry 1

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041

Introduction to food chemistry. Alcohol and Carbonyl chemistry. Carbohydrates. Lipids, amino acids and proteins. Enzyme reactions and applications in food chemistry. Vitamins, pigments, flavours and food additives.

CHEM3011

Physical Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: 6 units of credit in Level 1 Physics, CHEM2031 or CHEM2041.

Elements of symmetry and group theory appropriate to molecular structure and spectroscopy. Quantum chemistry; atomic and molecular spectroscopy - principles and applications.

CHEM3021

Organic Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM2021

Synthesis and reactions of the principal types of aromatic heterocyclic systems. Stereochemistry. Synthesis and reactions of carbocyclic systems. Application of spectroscopic methods, eg nuclear magnetic resonance, mass spectrometry, to determination of organic structures.

CHEM3031

Inorganic Chemistry

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM2031 or CHEM2839

This course provides students with an understanding of the structure and function of metal complexes, with a particular emphasis on recent developments and applications of these complexes in industry and

research. The course has four major components: (a) Metal complexes – fundamental theory, structure, spectroscopy and magnetism (b) Mechanisms in inorganic reactions, (c) An introduction to organometallic chemistry and catalysis and (d) Bioinorganic chemistry – the reaction chemistry of metalloenzymes.

CHEM3041**Analytical Chemistry**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM2041

This course builds on students' existing background in analytical chemistry to develop both theory and practice relating to the latest analytical techniques used in industry and research. The course covers method development, method validation and measurement uncertainty; theory, operation, instrumentation and applications for the major techniques in instrumental analysis, including separation techniques, mass spectrometry, hyphenated chromatography-mass spectrometry techniques, elemental atomic spectroscopy and mass spectrometry and electroanalytical techniques. There is a strong emphasis on practical experience.

CHEM3101**Project Laboratory in Chemistry**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

Group projects in instrumental and synthetic chemistry. Students choose two 7-week projects, one in each area. The course includes familiarisation with literature and database searching, project planning and risk assessment, preparation of oral and written project reports.

CHEM3201**Topics in Contemporary Chemistry A**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

An interdisciplinary course emphasising the latest advances in chemistry. A diverse range of topics will be offered each year from which students will select four. Topics will vary depending on availability and interest. Indicative Topics: supramolecular chemistry and molecular recognition; synthetic strategies in organic chemistry; molecular modelling and drug design; organometallic chemistry; surface chemistry and analysis; solid-state chemistry; polymer structure and characterisation; introduction to chemometrics; mass spectrometry.

Note: Re CHEM3201 and CHEM3202 Topics in Contemporary Chemistry: A wide range of topics will be offered each year (8 - 12 depending on availability and interest). Students can select 4 topics (6UOC) or 8 topics (12UOC).

CHEM3202**Topics in Contemporary Chemistry B**

School of Chemistry

UOC12 HPW12

Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

An interdisciplinary course emphasising the latest advances in chemistry. A diverse range of topics will be offered each year from which students will select eight. Topics will vary depending on availability and interest. Indicative Topics: supramolecular chemistry and molecular recognition; synthetic strategies in organic chemistry; molecular modelling and drug design; organometallic chemistry; surface chemistry and analysis; solid-state chemistry; polymer structure and characterisation; introduction to chemometrics; mass spectrometry.

Note: Re CHEM3201 and CHEM3202 Topics in Contemporary Chemistry: A wide range of topics will be offered each year (8 - 12 depending on availability and interest). Students can select 4 topics (6UOC) or 8 topics (12UOC).

CHEM3301**Chemistry in Biological Systems**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM3021

Covers: aspects of bioorganic, bioinorganic and bioanalytical chemistry including natural products chemistry, antibiotics and drugs, herbicides and pesticides; The occurrence, coordination and role of metals in biology, enzyme and immunoassays in chemical analysis, biosensors.

CHEM3311**Environmental Chemistry**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM3041

Selected topics in advanced environmental chemistry. Topics will be offered from a list including: heavy metals, detoxification mechanisms and inorganic speciation; sampling and strategies for environmental analytical chemistry; atmospheric chemistry and pollution mechanisms; case studies of organic pollutants and remediation mechanisms.

The laboratory component includes environmental project work and an introduction to regulatory requirements.

CHEM3811**Food Chemistry 2**

School of Chemistry

UOC6

Water in food. Dispersed systems; colloids and gels. Chemistry of colours and flavours in food. Food additives. Minerals. Food toxicants; pesticide residues. Theory and practice of modern methods of food analysis. Analytical principles. Official methods of analysis. Major instrumental techniques and their applications. Choice of an analytical method.

CHEM3829**Organic Chemistry**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM2021

The spectroscopic identification of organic compounds, free radical chemistry and electroorganic processes, various aspects of the organic industrial processes such as industrial synthesis based on petrochemicals, and organometallic reactions of industrial interest. Selected topics from the dyestuff, pharmaceutical and agricultural industries.

CHEM3901**Environmental Toxicology**

School of Chemistry

UOC6 HPW6

Prerequisite: CHEM1011 or CHEM1031.

Classification and properties of toxic substances. Biological properties of important classes of chemical compounds. Fate of xenobiotics in the human body, including detoxification and bioactivation. Chemical transformations of pollutants in the environment; air, water and soil pollution. Analysis of environmental pollutants at trace levels.

CHEM3997**Special Project in Chemistry 3**

School of Chemistry

UOC12 HPW12

Short theoretical or experimental research project, supervised by a member of academic staff. project planning, literature review, project development, oral and written reporting.

CHEM3998**Special Project in Chemistry 2**

School of Chemistry

UOC6 HPW6

Short theoretical or experimental research project, supervised by a member of academic staff. Project planning, literature review, project development, oral and written and reporting.

CHEM4003**Advanced Chemistry 4 Honours**

School of Chemistry

UOC24

Designed for those with a higher level of preparedness in Chemistry. A multifaceted course that will give students a high level of basic research skills, especially in critical evaluation of data and communication of results, but with a specialised focus on Chemistry. Consists of a selection of lectures and seminars on advanced topics in Chemistry and a research project.

CHEM4004**Advanced Chemistry 4 Honours (Mid-Year Start)**

School of Chemistry

UOC24

Designed for those with a higher level of preparedness in Chemistry. A multifaceted course that will give students a high level of basic research skills, especially in critical evaluation of data and communication of results, but with a specialised focus on Chemistry. Consists of a selection of lectures and seminars on advanced topics in Chemistry and a research project.

CHEM4005

Chemical Sciences 4 (Honours)

School of Chemistry
UOC24

Designed for those with broad interests in Science but with a wish to specialise in Chemistry. A varied program that will give students a high level of basic research skills, with emphasis on the critical evaluation of data and communication of results. Consists of a limited series of lectures and seminars on advanced topics in Chemistry, a literature review and research project on a major topic outside the review area.

CHEN2050

Chemical Engineering Laboratory 1

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC1020

An introduction to laboratory work in chemical engineering including technical report writing, flow sheet preparation, information retrieving and data processing techniques. Experiments in this subject are designed to demonstrate principles of industrial processes. Industrial operations are also analysed via reports from literature or multimedia, including videos.

CHEN2061

Introduction to Process Chemistry 1

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM1021 or CHEM1041

Definitions of classical thermodynamics. Pressure-volume-temperature properties of industrially important fluids. Applications of thermochemistry in industry. Conversion of heat into work. Concept of lost work. Heat engines and refrigeration cycles. General properties of solutions. Maximum conversion of reactants in batch and flow reactors. Reactor design and chemical kinetics. Reaction rates in industrial batch and flow reactors. Electrochemical principles in the context of important industrial electrochemical processes. Properties and applications of electrolytes. Industrial electrochemical processes, electrodes and cells. Surface phenomena. An integrated laboratory incorporating experiments designed to demonstrate the principles covered in the lecture material.

CHEN2062

Introduction to Process Chemistry 2

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEN2061.

An introduction to and survey of the organic and inorganic chemistry of industrially important products.

CHEN2140

Mass Transfer

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Introduction to various modes and mechanisms mass transfer. Physical origins and rate equations. Diffusivity. Diffusional mass transfer based on shell balances approach for one-dimensional steady state and transient transfer. Analogies between Heat and Mass Transfer Applications.

CHEN3021

Systems Modelling & Analysis

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW2
Prerequisite: CEIC2020, CEIC2110, CEIC2130, MATH2030

Mathematical tools used in the modelling and analysis of chemical, mineral, and environmental processes. Fundamental modelling of chemical, mineral, and environmental systems, based on physical laws, including modelling of lumped systems, discrete systems, multivariable systems, and distributed parameter processes. Application of mathematical analysis tools including: matrix and vector operators, solution of ordinary and partial differential equations, linearization methods, and functional analysis to the solution of problems in the chemical, mineral and environmental engineering fields. Statistical applications including parameter estimation, empirical modelling.

CHEN3022

Process Modelling & Optimisation

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2020, MATH2030

Techniques to solve models of chemical and mineral processes, and process optimisation with respect to financial and environmental objectives. The concepts of solution to process models covered include solution of single and multi-variable linear and nonlinear equations, numerical solution of ordinary differential equations, and parameter estimation from process data. The concepts of process optimisation covered include single and multi-dimensional nonlinear optimisation, linear programming, and dynamic programming. The methods are taught using examples of common applications of the presented concepts in the chemical and mineral processing industries.

CHEN3031

Advanced Transport Phenomena

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2120, CEIC2130, CHEN2140, MATH2030

Review of the analogy between mass, momentum and thermal transport. Derivation of the equations of change for: Isothermal systems - continuity and equation of motion, Non-isothermal systems - forced and free convection. Multicomponent systems. Case studies: Cone-and-plate viscometer, Vortex prediction in a stirred tank, Transpiration cooling, Free convection heat transfer from a vertical plate; simultaneous heat and mass transfer; drying. Mass transfer with chemical reaction. Transient analysis of transport phenomena: Viscous laminar flow, Heat conduction in solids. Diffusion - Evaporation and unsteady-state diffusion with chemical reaction. Two-dimensional transport problems. Power law fluids - momentum and thermal transport.

Note: This course is an extension of material given in CEIC2120 Fluid Flow, CEIC2130 Heat Transfer and CHEN2140 Mass Transfer.

CHEN3040

Separation Processes 1

School of Chemical Engineering and Industrial Chemistry
UOC4

CHEN3050

Particle Mechanics

School of Chemical Engineering and Industrial Chemistry
UOC3

CHEN3062

Particles, Separation, Heat Exchangers and Pressure Vessels

School of Chemical Engineering and Industrial Chemistry
UOC6

Stage wise separation processes: binary distillation, liquid-liquid extraction, solid-liquid extraction and absorption. HTU/NTU methods for the design and analysis of packed columns. Surface separation processes. Phase equilibria for multicomponent systems. Procedures for selection, design, specification and representation of pressure vessels and heat exchangers according to engineering standards and procedures. Particle size analysis. Fluid-particle interactions: drag coefficient, effect of Reynolds number. Terminal velocity, effect of shape and concentration. Drops and bubbles. Particle-particle interactions including flocculation. Flow through porous media. Darcy, Carman-Kozeny, Ergun equations. Application of fluid-particle systems: Sedimentation and thickening. Elutriation. Cyclones. Packed beds. Single phase flow. Filtration: constant pressure theory, specific resistance, equipment filter aids, centrifugal. Fluidisation: minimum fluidisation velocity, two-phase theory, bubble properties, applications. Spouting. Pneumatic and hydraulic conveying. Solids handling. Properties of granular solids and powders affecting storage and movement. Stockpiles, silos and hoppers: Feeders, conveyors or belts and elevators.

CHEN3065

Plant and Equipment Design

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: CEIC2110, CEIC2130, MATH2030.

Procedures for the selection, design, specification, construction and representation of process equipment according to engineering standards and procedures: Heat exchanger networks. Absorption, distillation, liquid-liquid extraction and adsorption involving stagewise and differential

contact. Membrane and other surface separation processes. Cooling towers. Drying. Multi-component separation: graphical methods, shortcut methods and rigorous computer techniques for the design and analysis of stagewise separation processes. Azeotropic and extractive distillation. Synthesis of separation sequences. Energy conservation in separation systems.

CHEN3067**Process Design & Economics**

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: CEIC2110, CEIC2130, MATH2030

Process development: All activities required from the conception of the idea to produce a product through to the finalisation of the process flow diagram including process selection and evaluation, process design and process representation. Process economics: Capital and operating costs of a process plants. Fixed and variable costs. Break-even analysis. Cost estimation methods. Project financing. Process materials: The use, performance limits and selection of metals, plastics, refractories, ceramics and glass in construction of process plants. Corrosion, strength of materials, use of codes and standards.

CHEN3068**Process Design & Safety**

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: CEIC2110, CEIC2130, MATH2030.

Process simulation: steady state and dynamic simulation of process plants including the use of industrial simulation packages. Process control: Development and representation of control schemes for process plant. Process safety: Techniques for assessing safety and risk of existing and proposed process plants. Systems reliability, HAZOP and HAZAN. Pressure and explosion relief. Laboratory safety.

CHEN3080**Chemical Engineering Practice 2**

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: CEIC2110, CEIC2120, CEIC2130, CHEN2050, CHEN2062, CHEN2140

An integrated chemical engineering laboratory incorporating experiments in fluid flow, heat/mass transfer, thermodynamics and kinetics, mineral processing and fuel technology. The objectives of the experiments are to demonstrate, reinforce and extend the principles of chemical engineering which are used in the investigation of chemical engineering problems and to develop an interest in experimentation and efficiency in writing technical reports and presenting technical seminars.

CHEN4031**Environmental Management 1**

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

This course deals with conventional and advanced separation processes for water and air pollution control, effluent treatment and waste minimisation in the Process Industries. Topic areas covered will be selected from: Gravity Separations, Filtration Processes, Sorption Processes, Extraction Processes, Membrane Technology, Biological Processes, Design, Control and Monitoring, Clean Production Technologies.

Management Issues: Sustainability, decision making, environmental management system (ISO14001), life cycle analysis, material and flux analysis.

CHEN4081**Design Project**

School of Chemical Engineering and Industrial Chemistry
UOC8 HPW6

Prerequisite: 132 units of credit

The project covers the engineering of all or part of a process plant. It requires the application of material covered in the entire undergraduate Chemical Engineering Degree program. The minimum requirements of the project are specified by the relevant engineering institutions accreditation standards. The project includes: selection and evaluation of the process flow sheet; design of facilities for processing, transport and storage of materials within the plant; plant sizing; equipment selection and cost estimation including utility requirements; plant location and layout; evaluation of the economic viability of the plant; control scheme development; hazard and risk assessment; preparation

of an environmental impact statement; preparation of a piping and instrumentation diagram. All aspects of the design are completed with regard to statutory requirements. Students develop skills in team work, interpersonal relationships, decision making and technical capabilities.

CHEN4091**Research Project Theory**

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Prerequisite: 132 units of credit

The course requires that the student elect a topic in Chemical Engineering, undertake a literature survey on that topic and produce a report.

CHEN4092**Research Project Practice**

School of Chemical Engineering and Industrial Chemistry
UOC12 HPW10

Prerequisite: CHEN4091

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHEN4093**Small Research Project Theory**

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: 132 units of credit

The course requires that the student elect a topic in Chemical Engineering, undertake a literature survey on that topic and produce a report.

CHEN4094**Small Research Project Practice**

School of Chemical Engineering and Industrial Chemistry
UOC8 HPW8

Prerequisite: CHEN4093

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHIN1006**Introductory Chinese 1 (Complete Beginners)**

Department of Chinese & Indonesian Studies
UOC6 HPW6

Excluded: CHIN1000, CHIN1106, HSC Chinese, native speakers of Mandarin Chinese, GENT0436, GENT0437

This is an integrated Standard Modern Chinese language skills program for beginners without any knowledge of Chinese and for background (dialect) speakers with no previous character knowledge. Students are taught in different groups according to their language background. The program combines listening, speaking and reading. The emphasis is on the development of communicative language competence. It includes an introduction to Chinese culture and civilisation.

CHIN1007**Introductory Chinese 2**

Department of Chinese & Indonesian Studies
UOC6 HPW6

Prerequisite: CHIN1006 or equivalent; Excluded: CHIN1000, CHIN1107, HSC Chinese, native speakers of Mandarin Chinese

Further consolidation and development of language skills acquired in CHIN1006.

CHIN2006**Intermediate Chinese Language 1**

Department of Chinese & Indonesian Studies
UOC6 HPW5

Prerequisite: CHIN1000 or CHIN1007 or CHIN1107 or equivalent; Excluded: CHIN2000, CHIN2001, CHIN2005, CHIN2010, CHIN2105, CHIN2106

Designed for students who have acquired a basic level of spoken Chinese and a working knowledge of up to six hundred characters in their first year of study as well as for those students who enter the Chinese language program with an equivalent knowledge of Chinese characters. The language component combines thought provoking conversation topics with a communicative approach and consolidates writing skills. A cultural component and a component for background speakers complement the program.

Note: Excluded HSC Chinese. Students are grouped according to their language ability.

CHIN2007**Intermediate Chinese Language 2**

Department of Chinese & Indonesian Studies

UOC6 HPW5

Prerequisite: CHIN2006 or CHIN2106 or equivalent; Excluded: CHIN2000, CHIN2001, CHIN2005, CHIN2010, CHIN2105, CHIN2107

A continuation of CHIN2006. The language component of 4 hours per week is complemented by the cultural component of 1 hour per week.

Note: Excluded HSC Chinese.**CHIN2210****Chinese English Translation**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN2100

Uses authentic texts to help students acquire advanced skills of translating from Chinese into English and vice versa. Techniques for analysing and rendering texts of different styles and degrees of complexity will also be examined.

CHIN2211**Interpreting between Chinese and English**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN3100

Specialises in two-way interpreting in various contexts including business, law, social welfare, health and public relations. The emphasis is on enhancing linguistic competence and cultural awareness while at the same time conveying professional knowledge and skills.

CHIN2220**Contemporary Chinese Literature**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN3020

Offers an overview of contemporary Chinese literature from 1949 to the present. Covers different genres such as short stories, prose and poetry as well as literary criticism.

CHIN2221**Classical Chinese Literature**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: CHIN1100 or CHIN1207

The ability to read classical Chinese or wenyan is essential for a thorough understanding of Chinese language, history and culture because, after all, the main corpus of literature on these topics is written in classical Chinese. Presents an overview of China's literary tradition focussing, in particular, on literary techniques used in a variety of text types such as poetry, essays, fiction and drama.

CHIN2222**The Chinese Lyric Journey: Classical Poetry and Painting**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: CHIN1100 or CHIN1207 or CHIN3107

Examines the interrelationship between classical Chinese poetry and painting in a broad context of Chinese poetics and aesthetics from an interdisciplinary perspective. A comparative approach will also be adopted to explore the similarities and differences between Chinese and European aesthetics - such as Chinese literati artists and French impressionists - paying particular attention to the philosophical and cultural milieu of their times. In addition to theoretical writings, the class will read and analyse classical Chinese literary and artistic works which will be treated both as artistic creations and objects of aesthetic appreciation.

CHIN2301**Chinese Social and Cultural Change through Visual Art**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Traces and analyses Chinese social and cultural change through visual art. In this course, art is considered a significant sociocultural text and is examined and analysed as such. While mainly following anthropological approaches, this study is, to a large extent, interdisciplinary. Development and transformation of visual art in China are examined with the aim of

understanding social and cultural change in contemporary China. Students also gain a knowledge of relevant and current anthropological and cultural theories and their application to the study of Chinese culture and art.

Note: The course will be taught in English.**CHIN2302****Chinese Cinema**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT0421

Since the mid-1980s, films from China have received critical acclaim in many circles and substantial scholarly response, both from within and outside Chinese Studies. Analyses significant feature and documentary films from China, beginning with examples of the cinema of the 1930s and 1940s, and highlights from the cinema of the hard-line Communist period. Examines examples from the ideological thaw in the late 1970s, the New Wave films of the 1980s and several avant-garde films from the 1990s.

CHIN2303**Gender in Contemporary China**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Aims at gaining insights into the situation of gender among China's Han majority and its many ethnic minorities. Examines gender in various contexts such as politics, religion, economy, the arts, ethnicity, Westernisation and globalisation. Specific topics include ideology of gender relations, sexual division of labour, gender representation in theatre and visual arts, gendered roles in religious practices, marriage customs, and morality and sexuality. Students learn relevant cultural theory and its application to the study of gender in contemporary China. Study materials include relevant academic writings and multimedia sources.

CHIN2310**Along the Silk Road: Conquerors, Traders and Explorers**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT0420

Introduces students to the many cultural influences, which contributed to the formation of the ancient world along the 'Silk Road'. The 'Silk Road' has been the link between the great civilisations of Europe and Asia. Travelled by conquerors, missionaries, traders and explorers, the 'Silk Road' carried ideas, religion, arts, technologies, cuisines and diseases, as well as silk and trade goods of all descriptions.

CHIN2313**Introduction to Chinese Performing Arts**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Offers insights into various forms of Chinese performing arts and their origins, historical development, contemporary situation and interactions beyond China. Learning materials include relevant academic writings and multimedia sources. Students learn contemporary cultural theory through examining live cases of Chinese performing arts.

CHIN2314**Introduction to Chinese Musical Culture**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

A systematic introduction to traditional and contemporary Chinese musical culture. Students learn contemporary theories in ethnomusicology, anthropology and cultural studies and their application in Chinese studies and the study of musical culture. Study materials include relevant academic writings, multimedia sources, and live performance.

CHIN2400**China Imagined and Perceived**

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Through texts of literature, philosophy, literary and cultural criticism and theory, supplemented by films of both Chinese and Western origin, this course examines how the Chinese depict themselves and how they are imagined/portrayed by other cultures.

CHIN2500**Advanced Chinese Business Language**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: CHIN1207

Introduces students to the language requirements for business and management in China through project work on Chinese language management case studies. Discusses and analyses a number of case studies and students will do project work and prepare presentations based on these cases.

CHIN2501**Chinese Business Enterprise**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: 48 units of credit; Excluded: IBUS2105, MGMT2105

An introduction to business and management in the People's Republic of China. Covers China's macro-economic and micro-economic environment, including enterprise reform, enterprise finance and stock markets, accounting and taxation, foreign trade and internationalisation, and the management of foreign invested enterprises. The nature of Chinese business enterprises and management practices will be covered in detail, as well as Australian-Chinese business relations, including trade and investment links.

CHIN2502**Commercial Chinese**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: CHIN1207

Introduces students to the language requirements for foreign investment in China through project work on Sino-foreign joint venture enterprises and wholly owned foreign enterprises. We will study the application and approval process and the related forms and documents. Students will develop their own projects and prepare Chinese language documentation.

CHIN3004**Advanced Chinese (In-Country)**

Department of Chinese & Indonesian Studies
UOC6 HPW5

Prerequisite: CHIN2000 or CHIN2005 or CHIN2007 or CHIN2107 or equivalent; Excluded: CHIN1206, CHIN3000, CHIN3106

Designed to combine in-country cultural experience with intensive language training at an advanced level. This summer course develops students' communicative competence in a Chinese university setting. Aims to expand knowledge of Chinese characters and general language competence in a variety of areas. Prepares students to enter CHIN3006 at a higher level from where they can proceed to Professional Electives and Chinese Studies courses.

CHIN3006**Advanced Chinese 1**

Department of Chinese & Indonesian Studies
UOC6 HPW5

Prerequisite: CHIN2000 or CHIN2005 or CHIN2007 or CHIN2107 or equivalent; Excluded: CHIN1206, CHIN3000, CHIN3106

Aims to further develop students communicative competence in Chinese to a level at which they can discuss contemporary social, cultural and intellectual issues. A wide range of texts and authentic materials from Chinese media are studied. This course is open to native speakers who require remedial teaching before proceeding to the Professional Electives in Chinese language and the Chinese Studies courses.

CHIN3007**Advanced Chinese 2**

Department of Chinese & Indonesian Studies
UOC6 HPW5

Prerequisite: CHIN3006 or CHIN3106 or equivalent; Excluded: CHIN1207, CHIN3000, CHIN3107

Further consolidation and development of language skills acquired in CHIN3006.

CHIN3030**Professional Communication Skills in Chinese 1**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: CHIN3007 or CHIN3107 or equivalent

Aims to provide students with Chinese communication skills at a level beyond Advanced Chinese Language, with particular focus on communication skills needed in professional settings, such as writing professional letters, reading newspaper editorials and technical documents, public speaking, and understanding topics of a more technical nature.

CHIN3031**Professional Communication Skills in Chinese 2**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: CHIN3030 or equivalent

Further consolidation and development of professional communication skills acquired in CHIN3030.

CHIN3900**Advanced Chinese Studies**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of Chinese at credit level; Excluded: CHIN3300

Examines the major issues and questions that have informed research on China by classical sinologists and contemporary China scholars. Topics include Chinese Literature, Cultural and Gender Studies, Chinese Linguistics, Provincial Studies and Socio-economical issues. Students will become acquainted with the major authors and their contributions to the field. This is one of two courses designed primarily for intending Honours students who want to prepare themselves for the research work involved in an Honours degree in Chinese or Asian Studies.

CHIN3901**Research Methods in Chinese Studies**

Department of Chinese & Indonesian Studies
UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of Chinese at credit level; Excluded: CHIN3301

Familiarises students with the research tools and methods available for research in Chinese Studies, including Chinese Literature, Cultural and Gender Studies, Chinese Linguistics, Provincial Studies and Socio-economical issues. This is one of two courses designed primarily for intending Honours students who want to prepare themselves for the research work involved in an Honours degree in Chinese or Asian Studies.

CHIN4000**Chinese Honours Research Full-Time**

Department of Chinese & Indonesian Studies
UOC24 HPW5

Prerequisite: 54 units of credit in Chinese Studies at an average of 70%, CHIN3900 or CHIN3300, CHIN3901 or CHIN3301

Students will complete two coursework components and write an Honours research thesis of between 15,000 and 20,000 words.

Note: Intending Honours students are recommended to contact the Head of Department at an early stage in their undergraduate studies to discuss their selection of courses and their proposal for the Honours research project.

CHIN4050**Chinese Honours Research Part-Time**

Department of Chinese & Indonesian Studies
UOC12 HPW3

Prerequisite: 54 units of credit in Chinese Studies at an average of 70%, CHIN3900 or CHIN3300, CHIN3901 or CHIN3301

Students will complete two coursework components and write an Honours research thesis of between 15,000 and 20,000 words.

Note: Intending Honours students are recommended to contact the Head of Department at an early stage in their undergraduate studies to discuss their selection of courses and their proposal for the Honours research project.

CHIN4500**Combined Chinese Honours Research Full-Time**

Department of Chinese & Indonesian Studies
UOC12 HPW2

Prerequisite: 48 units of credit in Chinese Studies at an average of 70%, CHIN3901 or CHIN3301

For Combined Honours, students are required to present a thesis and complete a coursework program as approved by the Heads of the two participating Schools/Departments.

Note: Combined Honours programs require coordination between the two schools/departments involved.

CHIN4550

Combined Chinese Honours Research Part-Time

Department of Chinese & Indonesian Studies

UOC6 HPW2

Prerequisite: 48 units of credit in Chinese Studies at an average of 70%, CHIN3901 or CHIN3301

For Combined Honours, students are required to present a thesis and complete a coursework program as approved by the Heads of the two participating Schools/Departments.

Note: Combined Honours programs require coordination between the two schools/departments involved.

COFA0201

Graphics, Global Communication and Society

College of Fine Arts

UOC6 HPW3

Online Elective Course

Graphics, Global Communication and Society (GGCS) concerns meaning-making in graphic design within global and national contexts, and complements theoretical and practical studies in art and design. During the last two decades of the 20th century computers, digitisation and information technology have contributed to significant changes in graphic design. Parallel to these changes are the cultural, socio-economic and political perspectives on graphics and the representation of national experience. These profound changes affect the way knowledge is produced and consumed just as the invention of printing transformed the dissemination of information in Renaissance Europe. Although the digital revolution has transformed the roles, working methods, project management and production processes for designers and printers, the digitisation of text and pictures has also exerted a compelling influence on the aesthetics and designing of the graphic image in print and electronic media for a global audience.

Graphic design is a social activity in which the digital reconfiguration of the image engenders new forms of visual experiences. The course content addresses theoretical and methodological issues in the production and consumption of graphics, in particular cross-cultural significance in contemporary society, including form and function in global communication design; pictorial and narrative structures in visual communication; systems of icons and symbols as a global visual language, and the influence of technology on aesthetics and visual experience.

This fully online course comprises a series of lectures, learning activities and assessment tasks delivered via the Internet using an engaging interface that specifically supports textual and visual communication. Your assessment tasks will include individual and team projects to encourage group participation and collaboration, complemented by regular tutor and peer student feedback to enhance your understanding and critical analysis of graphics within global and social contexts.

Excluded: GEND0201.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0202

Collaboration & Play in Interactive Design

College of Fine Arts

UOC6 HPW3

Online Elective Course

Over recent decades we have witnessed a massive influx of interactive environments, many of which form a significant part of our culture and daily lives. These take many forms such as entertainment, communications, business and surveillance devices to name but a few. Many of these new forms are poorly understood, however this poses exciting new opportunities for future designers and artists to explore uncharted territory. Collaboration and play are essential forms of research and production, both facilitated by and responsible for these emerging media forms. This fully online course examines the underlying features of interactivity combining theories of new media and play with collaborative art and design practice.

This online course comprises a series of six lectures plus learning activities and assessment tasks that seek to discover and understand the underlying 'language' of interactivity and extend into practical approaches to creating interactive experiences within collaborative environments. The content includes the study of interactive media (from non-computer interactions to wireless devices), questions existing conventions of interactivity, explores the notions of play and iterative design (in which new ideas are 'found' by generating successive versions of a project) and culminates in the production of interactive works.

Assessment tasks will include individual participation and online team projects to encourage group interaction and collaborative processes, which are essential to discovering and defining this new and exciting paradigm.

Excluded: GEND0202.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0203

Collaboration & Visual Communication in Graphic Design

College of Fine Arts

UOC6 HPW3

Online Elective Course

The activity of *designing* has witnessed a definitive shift in attitude over the past decade. More and more designers, from a variety of disciplines, are choosing to adopt collaborative working approaches when undertaking commercial and experimental projects. Design theorists now acknowledge that designing is fundamentally a collaborative, interdisciplinary, geographically distributed and multimedia activity; thus supporting the notion of an evolution in contemporary design methodology. This significantly challenges the traditional paradigm of *designing* being a personal activity and contradicts opinion that collaboration hinders, rather than enhances, a designer's thought process. The traditional design process, seen as an individual's reflective dialogue with their work, no longer seems solely applicable in contemporary design practice.

This online course specifically recognises the emergence of 'collaborative design' in contemporary graphic and visual communication. It responds by utilising a specifically designed interface, allowing you to engage in peer collaboration, visual exchange and conceptual dialogue via the Internet. By working in small teams (where your fellow participants are often in different locations) you will take part in a unique and dynamic online design process. You will examine creative and conceptual approaches to graphic design by engaging in theoretical and visual research, abstraction of ideas and resolution of collective design proposals. Both individual and group assessment/feedback will be given throughout the course to enhance your experience of creative collaboration in graphic design.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0207

Textile Design: Tradition & Contemporary Technology

College of Fine Arts

UOC6 HPW3

Online Elective Course

In 20 years time, will clothes be intelligent, self cleansing, or grown from a living layer of tissue?

This fully online course will look at the exciting possibilities of the future of textile design in relationship to the body including wearable fabrics, clothing, extensions and accessories. Developments in textile technology are evolving at a rapid pace, with innovations that will allow you to reassess what textiles for the body can be. The course will look at textile design in relationship to both the surface and structure of a 'fabric'.

The topics will look at the interdependence and relationship between traditional techniques and contemporary technology and how developments across both areas have revolutionised textiles. The course will also look at how these advancements are impacting how we dress today, the materials being used for clothing now, the future potential for wearable fabrics and what these may mean in the future. The course will explore these developments with reference to artists, designers and companies.

You will learn how to analyse the development of textile design from fundamental theoretical and historical viewpoints. You will also be able to identify how contemporary textile design for clothing and the body has been influenced by the interrelationship between traditional and technological processes. By experimenting with your own individual projects you will examine the influence of traditional processes on technology and how traditional techniques utilise new technology. Through collaborative projects you will explore the innovative potential of the characteristics and functions clothing may have in the future. You will learn how to appreciate the scope of textile design for the body.

Excluded: GEND0207.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0208

Fashion in Contemporary Culture

College of Fine Arts
UOC6 HPW3

Online Elective Course

Why do high-heeled shoes feature in the television series *Sex and the City*? How are fashion, gender and sexuality linked? Why can women now wear a cheongsam dress and trainers? Fashion history and theory is one of the most rapidly developing areas of humanities research, drawing upon new theories of the body, social space, surfaces, ephemerality and popular culture.

This course examines fashion as a vehicle of self-fashioning since the 1980s. It will present a variety of theoretical methods to interpret the fashion choices of post-modern society.

You will study themes including fashion and identity politics; the 'post-subculturalist'; fashion design and the street; gender and consumerism; cross-cultural dressing. You will examine topics including music and dress; dress and sexuality; vintage, retro and second-hand clothing; 'anti-fashion'; 'costume play' and Japanese 'cuteness' (kawaii); and the spectacle of the contemporary fashion parade.

The course will include topics and collaborative assessment in which 'net society' plays a role. Your tasks may range from online diaries to role-plays as a fashion victim having to defend your stance.

Excluded: GEND0208, SAHT2227.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0209

Cross Cultural Installation Art

College of Fine Arts
UOC6 HPW3

Online Elective Course

The course focuses on the increasing globalisation of contemporary art practice, in particular installation art, as an outcome of the outreach of international media, communications, migration, cultural commerce, international cultural events, cultural exchange and tourism.

It addresses the culturally diverse backgrounds of COFA's, and UNSW's, students as both a creative resource and entry point for concept based, intra subjective research in the studio.

The project work emphasises the creative application of students' existing technical skills and aims to enhance the student's ability to manipulate spatiality, imagery, objects and materials to create installed artworks. A high level of engagement with aesthetics is encouraged to amplify the students' perceptual awareness of their artwork and everyday environment, along with reflection upon their subjective world. Through the analytical and critical interpretation of each other's work and current exhibitions, an appreciation of contemporary installation art will be fostered. The development of the artworks' conceptual content in concert with methods to represent these individual ideas and insights is integral to the course's curriculum.

A group studio theory project will increase the students' knowledge of the field, and a thread of professional practice throughout the course will teach exhibition skills as a vocational attribute.

Excluded: GEND0209.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0210

Spatial Branding

College of Fine Arts
UOC6 HPW3

Online Elective Course

It may seem obvious why a fashion boutique stamps a big logo on the front of its commercial premises, however, ask yourself: why do local councils label street signs in their municipality with a council emblem, or why do public parks nowadays have a logo designed to represent them?

Most environments we encounter on a daily basis have been designed to carry a specific visual identity or brand. Some of the more obvious examples include retail stores, shopping malls and themed parks. Today, however, even train stations, public parks and city districts are being visually branded.

The course Spatial Branding explores a range of commercial and non-commercial spaces. It examines how visual identity has been programmed into these spaces and how this affects the user-experience. Through these examples, the course aims to evaluate the practice of 'spatial branding', focusing on some of the relevant social, commercial and ethical issues. As part of the practical aspect of the course, students will learn how to create a spatial identity and apply it to a range of environments, after which students will be introduced to the fabrication process and learn how a tender is put together.

This course includes a series of online lectures, individual and group tasks and site visits (in your locality) that will provide you with insight needed to identify social and commercial implications arising from the practice of 'spatial branding'.

Excluded: GEND0210, SDES3103, SDES3110.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COMD1001

Development Studies: The Emergence of Underdevelopment

Faculty of Arts and Social Sciences
UOC6 HPW3

Excluded: COMD1000

Introduces and analyses the emergence in the pre and post industrial world of notions of progress and development and relates them to the emergence of a modern world characterised by poverty, conflict, and socio-economic inequalities. Examines the transformation of the modern world via an analysis of different and often overlapping modes of production including hunter/gatherer, tributary (agricultural) and capitalist modes. Examines the emergence and characteristics of contemporary debates around issues of 'development', 'imperialism' and 'globalisation'.

COMD1002

Development Studies: Poor World, Rich World

Faculty of Arts and Social Sciences
UOC6 HPW3

Excluded: COMD1000

Examines the characteristics and interpretation of the poor world/rich world divide. Traces the relationships between the rich world from 1945 to the present focusing on the international division of labour, militarism, the roles of finance capital, multinationals and the multilateral agencies, and the attempts of some societies to escape the 'poverty trap'. Countries will be examined to see if they can serve as models, as well as development predictions about countries like Brazil, Russia, India and China will be examined. The role of women, minorities and issues such as the environment in development will be considered.

COMD2000

The Theory and Practice of Development

School of Social Science and Policy
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2104, INST2400, POLS2023, SLSP2701

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant cases studies of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

COMD2010

(Un)Making the Third World: History and Global Development B

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2101, HIST2040, HIST2060, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

COMD2020

(Un)Making the Third World: History and Global Development A

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2102, HIST2061, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

COMD2050

Sustainable Development, Globalisation & the Third World

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPSC2550, INST2401, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

COMD4000

Development Studies Honours (Research) Full-Time

School of Social Science and Policy

UOC24 HPW4

Prerequisite: 54 units of credit in COMD at 65% or better including 12 units of credit at the 3000 level and permission of the Coordinator of Development Studies

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the Coordinator and to complete two fourth year seminar courses.

COMD4050

Development Studies Honours (Research) Part-Time

School of Social Science and Policy

UOC12 HPW2

Prerequisite: 54 units of credit in COMD at 65% or better including 12 units of credit at the 3000 level and permission of the Coordinator of Development Studies

Students are required to participate in two Honours research seminars, at least one taken in the first session of enrolment and complete a research thesis of between 15,000 and 20,000 words. The research seminars are to be selected with the permission of the Coordinator of Development Studies, and in consultation with the relevant program coordinator.

COMD4500

Combined Honours (Research) in Development Studies F/T

School of Social Science and Policy

UOC12 HPW2

Prerequisite: 48 units of credit in COMD including COMD2000 at an average of 70%

For Combined Honours, students are required to present a thesis as approved by the Heads of the participating Schools or Departments.

COMD4550

Combined Honours (Research) in Development Studies P/T

School of Social Science and Policy

UOC6 HPW2

Prerequisite: 48 units of credit in COMD including COMD2000 at an average of 70%

For Combined Honours, students are required to present a thesis as approved by the Heads of the participating Schools or Departments.

COMP1011

Computing 1A

School of Computer Science and Engineering

UOC6 HPW6

Defining problems. Reasoning about and solving problems using Logic, Abstraction, Specification, Algorithms and Data Structures. Exposure to a functional programming language (Haskell) for practical experience with these concepts. Introduction to software engineering and professional ethics. Lab: programming assignments.

Assumed knowledge: HSC Maths: 2 units (90-100), or 2 and 3 unit (100-150), or 3 and 4 unit (100-200).

Further Information

CSE class page www.cse.unsw.edu.au/~cs1011

COMP1021

Computing 1B

School of Computer Science and Engineering

UOC6 HPW6

Prerequisite: COMP1011 or COMP1711; Excluded: COMP1821, COMP1721.

The objective of this course is for students to develop proficiency in programming in a high level imperative language and to develop a background of relevant knowledge and skills on which to base further study of computing. Topics covered include: fundamental data structures and algorithms, program testing and debugging and the structure of computer systems. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs1021

COMP1081

Harnessing the Power of Information Technology

School of Computer Science and Engineering

UOC6 HPW5

Prerequisite: Enrolment in a non-CSE program

In the digital age, it is increasingly becoming essential to use, innovatively and effectively, current and emerging information technologies to meet challenges of the new "knowledge economy". Topics include: history of IT, business and online applications, data and knowledge representation, coding and security, viruses, worms and other malware, programming principles and techniques. The course will examine latest information technology trends and outline new technologies on the horizon. Available to non-computing majors only.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs1081

COMP1091

Solving Problems with Software and Tools

School of Computer Science and Engineering

UOC6 HPW5.5

Prerequisite: Enrolment in a non-CSE program

Introduction to building applications and using software tools to solve computing problems. Emphasis is on acquisition of fundamental skills in procedural programming and scripting. Topics include: software design and development, C syntax and semantics, algorithms and programming techniques, data representation, image processing and analysis, interfacing to libraries; Linux tools; command scripts; reporting, data analysis and transformation using a scripting language.

Note/s: Assumed knowledge: COMP1001 or COMP1081; Excluded: COMP1011, COMP1711.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs1091

COMP1711

Higher Computing 1A

School of Computer Science and Engineering

UOC6 HPW7

Excluded: COMP1011, COMP1811.

As for COMP1011 but in greater depth and at a faster pace. Additional non assessable extension material (just for interest). Assumes no prior computing background but must be enthusiastic.

Assumed Knowledge: There is no specific assumed knowledge. We suggest this course be taken by those with HSC Maths 2 and 3 units: (145-150), or 3 & 4 unit Maths (186-200), or UAI > 97.

Note/s: Enrolment requires School approval which is granted automatically on submitting consent form.

(Please see <http://www.cse.unsw.edu.au/~cs1711/consent-to-do-1711.html>)

Further Information: CSE class page: www.cse.unsw.edu.au/~cs1711

COMP1721

Higher Computing 1B

School of Computer Science and Engineering

UOC6 HPW7

Prerequisite: a mark of at least 75 in COMP1011 or COMP1711; Excluded: COMP1021, COMP1821, COMP2811.

As for COMP1021 but in greater depth and breadth.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs1721

COMP2011

Data Organisation

School of Computer Science and Engineering

UOC6 HPW5

Prerequisite: COMP1021 or COMP2811 or COMP1721

Data types and data structures: abstractions and representations; dictionaries, priority queues and graphs; Search trees, heaps. File Structures: storage device characteristics, keys, indexes, hashing. Memory management. Programming assignments, Mid and final session examinations.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2011

COMP2041

Software Construction: Techniques and Tools

School of Computer Science and Engineering

UOC6 HPW5

Prerequisite: COMP1021 or COMP1721 or COMP2811.

Software system decomposition and design. Overview of the software development life-cycle. Command languages. Version control and configuration management, programming for reliability. Testing and debugging techniques. Profiling and code improvement techniques. Practical work involving programming-in-the-large.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2041

COMP2091

Computing 2

School of Computer Science and Engineering

UOC6 HPW5.5

Prerequisite: COMP1091; Excluded: COMP2011, COMP2711

Abstract data types and data structures: sequential (lists, stacks, queues), dictionaries (binary trees, hashing), priority queues (heaps), graphs and networks. Implementation of associated algorithms in C. Informal analysis of efficiency. File structures: binary formats, direct access techniques, XML. Data compression, Huffman coding. Numeric representation and limitations. Conditional compilation, storage classes, memory management, function parameters, using profilers and debuggers. Interfacing to libraries. Introduction to multi-threading.

COMP2111

System Modelling and Design

School of Computer Science and Engineering

UOC6 HPW5

Prerequisite: COMP1021 or COMP1721; Corequisite: MATH1081; Excluded: COMP2110.

This course introduces rigorous and formal methods for modelling system behaviour. The course will use the B Method (B), which is a formal method founded on set theory and logic. B supports the modelling of abstract specifications and the refinement of abstract specifications through to concrete implementations. Consistency of formal development is verified by proof obligations and formal proof. A toolkit (the B-Toolkit or Atelier B) assists with all aspects of the process.

The course will cover: set theory, logic, abstract machines, specification, animation, refinement, implementation, proof obligations and proof.

The course will also explore the relationship between formal B models and UML, the informal or semi-formal modelling notation for Object-Oriented design. The course will use case-studies and assignments to develop competence. The methods developed in this course will be used in the SENG2010 and SENG2020 workshops.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2111

COMP2121

Microprocessors and Interfacing

School of Computer Science and Engineering

UOC6 HPW5

Prerequisite: COMP1021 or COMP1721 or COMP1091. Exclusions: ELEC2041, COMP9221, COMP3221, COMP2821.

Instruction Set Architecture (ISA), Floating point number representation, computer arithmetic, assembly and machine language programming, machine language fundamentals; addressing modes; instruction repertoire, assembly language programming methodology, interrupts and I/O interfacing (hardware and software), serial communication, timers, analog input and output, converting analog signals to digital signals (data acquisition), taking input from a variety of sensors and driving actuators, buses and memory system, low level device drivers.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2121

COMP2411

Logic and Logic Programming

School of Computer Science and Engineering

UOC6 HPW5

Introduction to logic for computer scientists: an elementary exposition of propositional logic and predicate logic from a computational point of view, including introduction to interpretations, models, proof procedures, soundness, and completeness. Automated deduction: clausal form logic and Horn clause logic, skolemisation, the Herbrand domain, unification, resolution and resolution strategies. Logic Programming: data representation, operational views of unification and backtracking, the notion of logical variable, reversibility, non-logical features, meta-programming, introduction to constraint logic programming and other paradigms. Lab: programming assignments in Prolog. Extensive practical work.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2411

COMP2711

Higher Data Organisation

School of Computer Science and Engineering

UOC6 HPW7

Prerequisite: COMP1721 or, a mark of at least 75 in COMP1021 or COMP2811; Excluded: COMP2011.

As for COMP2011 but in greater depth and breadth.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs2711

COMP2811

Computing B

School of Computer Science and Engineering

UOC6 HPW6

Prerequisite: COMP1011 or COMP1711 or COMP1811; Excluded: COMP1021, COMP1721, COMP1821.

The objective of this course is for students to develop proficiency in programming in a high level imperative language and to develop a background of relevant knowledge and skills on which to base further study of computing. Topics covered include: fundamental data structures and algorithms, program testing and debugging and the structure of

computer systems. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

Further Information: CSE class page www.cse.unsw.edu.au/~cs2811

COMP2920

Professional Issues and Ethics for Computer Science

School of Computer Science and Engineering
UOC3 HPW3

Not available to students in CSE programs: 3645, 3722, 3726, 3728, 3648, 3651, 3652, 3653, 3749, 3647, 3715, 3755, 3756, 3757.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, survey of employment in IT, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page www.cse.unsw.edu.au/~cs2920

COMP3111

Software Engineering

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9008.

The phases of the software lifecycle: requirements, specification, (informal and formal) analysis, design, implementation, testing, integration, and maintenance are studied. Also focuses on software project management. A major group-based software development project is undertaken.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3111

COMP3120

Introduction to Algorithms

School of Computer Science and Engineering
UOC3 HPW2.5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP3121, COMP9101.

Design and algorithms using divide-and-conquer, greedy, inductive, parallel and systolic strategies. Models of computations. Correctness and complexity analysis. Time and space analysis: worst- and average- and amortised case algorithms. Algorithms: sorting and searching, trees, graphs and matrices.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3120

COMP3121

Algorithms and Programming Techniques

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9101, COMP3120.

Correctness and efficiency of algorithms. Computational complexity: time and space bounds. Techniques for best-case, worst-case and average-case time and space analysis. Designing algorithms using induction, divide-and-conquer and greedy strategies. Algorithms: sorting and order statistics, trees, graphs, matrices. Intractability: classes P, NP, and NP-completeness, approximation algorithms.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3121

COMP3131

Programming Languages and Compilers

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9102.

Covers the fundamental principles in programming languages and implementation techniques for compilers (emphasis on compiler front ends). Course contents include: program syntax and semantics, formal translation of programming languages, finite-state recognisers and regular expressions, context-free parsing techniques such as LL(k) and LR(k), attribute grammars, syntax-directed translation, type checking and code generation. Lab: implementation of a compiler in a modern programming language for a small programming language.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3131

COMP3141

Software System Design and Implementation

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2110 or COMP3111.

This course will present rigorous and formal methods for the design and implementation phases of software system development. Also considered are testing and reuse of designs. As far as possible, software tools that can assist the process will be used. The material will be presented using case studies, and students will be required to undertake a project.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3141

COMP3151

Foundations of Concurrency

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9151.

Concurrency = processes + communication. Communication via shared variables vs message passing. Models of concurrency: true concurrency vs interleaving. Abstractions: atomicity, locks and barriers, semaphores, monitors, threads, RPC, rendezvous. Classical problems: mutual exclusion, dining philosophers, sleeping barber, termination detection, gravitational N-body problem.

Practical work: programming assignments using the C-like language MDP.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3151

COMP3161

Concepts of Programming Languages

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP2011 or COMP2711

Programming language paradigms: imperative, object oriented, declarative (i.e., functional and logic). Theoretical foundations of programming languages: syntax, operational, axiomatic and denotational semantics. Implementation aspects of central language features, such as dynamic and strong typing, polymorphism, overloading and automatic memory management. Abstracting over programming languages and architectures: byte code approach, component software.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3161

COMP3211

Computer Architecture

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2021 or COMP3222 or ELEC2041; Excluded: COMP9211.

Study the architecture & organisation of modern processors, and influences upon these, with emphasis on pipelined RISC machines; gain understanding of the design of the memory subsystem, I/O, and system level interconnect; become proficient in the use of tools such as VHDL and SimpleScalar for the description, simulation, and verification of architectural designs; complete a series of assignments leading to the design, implementation, validation and assessment of a RISC system. It is assumed students are familiar with combinational and sequential logic design principles and have some experience in the use of CAD tools to describe and simulate digital systems.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3211

COMP3222

Digital Circuits and Systems

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2121 or COMP2821. Exclusions: COMP2021, ELEC1041, COMP3881.

This course aims to provide students with a knowledge of problem solving with digital systems (computer systems and digital circuits). The basic building blocks of combinational and sequential circuits are introduced to develop circuit solutions to problems and to understand and implement the design and operation of hardware models of digital and computer systems. HDLs will be used to describe circuits and state of the art computer aided design tools will be used to design complex systems.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3222

COMP3231

Operating Systems

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711, COMP2121 or ELEC2041; Excluded: COMP3891, COMP9201, COMP9283.

Operating System Organisation and services. Process management: scheduling, synchronisation and communication. Memory management: virtual memory, paging and segmentation. Storage management: disk scheduling, file systems. Protection and security. Distributed operating systems and file systems. Case studies: UNIX & NT. Lab: Programming assignments.

Assumed Knowledge: C

Further Information: CSE class page www.cse.unsw.edu.au/~cs3231

COMP3241

Real-Time Systems: Specification, Design & Implementation

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP3231 or COMP9201 and, COMP3111 or COMP9008 or COMP2111 or COMP4001, or extended versions.

System taxonomy. Time and causality. Characteristics of real-time systems and their environment. Real-time systems design such as real-time UML; model driven and software architectures; software and requirements engineering for real-time systems; temporal reflection. Performance analysis: worst case execution time analysis; scheduling tasks (rate monotonic, generalised rate, slack scheduling); reliability analysis and fault tolerance. Risk assessment and minimisation. Famous faults and disasters. Time triggered architectures and approaches. Real-time languages and language Extensions. Real-time communication.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3241

COMP3311

Database Systems

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9311, INFS3608.

Data models: entity-relationship, relational, object-oriented. Relational database management systems: data definition, query languages, development tools. Database application design and implementation. Architecture of relational database management systems: storage management, query processing, transaction processing. Lab: design and implementation of a database application.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3311

COMP3331

Computer Networks and Applications

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9331, COMP9833, COMP9391, TELE4352.

Networking technology overview. Protocol design and validation using the finite state automata in conjunction with time-lines. Overview of the IEEE802 network data link protocol standards. Addressing at the data link and network layers. Network layer services. Introduction to routing algorithms such as Distance Vector and Link State. Congestion control mechanisms. Internetworking issues in connecting networks. The Internet Protocol Suite overview. The Internet protocols IPv4 and IPv6. Address resolution using ARP and RARP. Transport layer: issues, transport protocols TCP and UDP. Application level protocols such as: File Transfer Protocol (FTP), Domain Name System (DNS) and Simple Mail Transfer Protocol (SMTP). There is a substantial network programming component in the assessable material.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3331

COMP3411

Artificial Intelligence

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9414.

Machine intelligence. Principles: knowledge representation, automated reasoning, machine learning. Tools: AI programming languages, control methods, search strategies, pattern matching. Applications: computer vision, speech recognition, natural language processing, expert systems, game playing, computer-aided learning. Philosophical and psychological issues. Lab: logic programming assignments.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3411

COMP3421

Computer Graphics

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9415.

Graphics hardware: scan conversion of lines and polygons. 2D transformations: windowing, clipping, viewports. User interfaces. 3D transformations: perspective transformation, 3D clipping, hidden surface removal, lighting and texture maps. Hierarchical modelling of objects, modelling curves and surfaces with splines and fractals. Graphics standards. Lab: programming assignments.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3421

COMP3431

Robotic Software Architecture

School of Computer Science and Engineering
UOC6 HPW6

Prerequisite: Overall WAM of 80 and, COMP2011 or COMP2711 or COMP9024 or, enrolment in MIT program 8684 or GradCert program 7344.

An introduction to Intelligent agent design. Picking actions using planning, learning or engineered control. Both practical and theoretical components. Practical component: Re-implement parts of a real agent architecture on a robot. Assignment based. Emphasis on engineering a working system. Theoretical component: Introduction to a variety of research agent architectures including classical planning and reinforcement learning. Lecture and lab based.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3431

COMP3441

Cryptography and Distributed Systems Security

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711 and, MATH1081 or MATH1090 and, a mark of at least 65 in COMP3331 or 12uc of courses with a mark of 75 or better.

Topics chosen from: intrusion detection, prevention, and response, ciphers and cryptanalysis, private key and public key systems, secure hash functions, cryptographic protocols, protocol analysis, digital signatures, public key infrastructures, authentication, key agreement, authorization, timestamping, trust management, social and legal issues, Java security model, digital cash, payment protocols, digital rights management, zero knowledge protocols, complexity theoretic foundations, quantum cryptography.

Assumed Knowledge: MATH1081 Discrete Mathematics.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3441

COMP3511

Human Computer Interaction

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP2011 or COMP2711; Excluded: COMP9511.

Provides an introduction to user-system interactions, both analysis and design. The approach is cognitive, focusing on matching user goals with computer technologies. Topics: the human information processing system, models of interaction, strategies for and process of design and evaluation. Project work is emphasised.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3511

COMP3711

Software Project Management

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: Completion of stage 1 in Software Engineering programs, or completion of stage 2 in Bioinformatics or Computer Engineering programs. Excluded: COMP3710, COMP3720.

This course will provide students with the analytical and practical skills to plan, develop and improve the effectiveness of a project through hands-on team and project management. The purpose of the course is to provide fundamental insights and introduce project management tools and techniques that will be useful throughout an engineer's career.

Further Information: CSE class page: www.cse.unsw.edu.au/~cs3711

COMP3821

Extended Algorithms & Programming Techniques

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: a mark of at least 70 in COMP2011 or COMP2711; Excluded: COMP3120, COMP3121, COMP9101, COMP9801.

As for COMP3121 but in greater depth.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3821

COMP3891**Extended Operating Systems**

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: a mark of at least 70 in COMP2011 or COMP2711 and, COMP2121 or ELEC2041; Excluded: COMP3231, COMP9201, COMP9283.

As for COMP3231 Operating Systems but in greater depth and breadth.

Assumed Knowledge: C

Further Information: CSE class page www.cse.unsw.edu.au/~cs3891

COMP3901**Special Project A**

School of Computer Science and Engineering
UOC6

The student will complete a small research project under the supervision of a member of the academic staff of the School. The project will be assessed on the basis of a project written by the student.

COMP3902**Special Project B**

School of Computer Science and Engineering
UOC12 HPW1

The student will complete a medium-sized research project under the supervision of a member of the academic staff of the School. The project will be assessed on the basis of project written by the student.

COMP3931**Extended Computer Networks and Applications**

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: a mark of at least 70 in COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9331, COMP9833, COMP3331, TELE4352.

As for COMP3331 Computer Networks and Applications but in greater depth and breadth.

Further Information: CSE class page www.cse.unsw.edu.au/~cs3931

COMP4001**Object-Oriented Software Development**

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: COMP2011 or COMP2711

This course will cover object-oriented design and implementation methods for complex software systems. Topics covered include: object-oriented program design techniques, object-oriented programming in C++, software reuse and designing for reuse, design patterns and styles, object persistence and distribution. Examples from a wide range of application areas will be used at all stages to illustrate concepts and techniques.

Assumed Knowledge: Competency in C.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4001

COMP4003**Industrial Software Development**

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: COMP9024 or enrolment in MIT program 8684 or GradCert program 7344.

Introduction to development and distribution of large software systems. Use of industrial tools for maintaining the code base and for producing quality portable, deliverable code. Methods for producing systematic test suites. Additional topics include licensing issues, software configuration, and internationalisation.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4003

COMP4121**Advanced and Parallel Algorithms**

School of Computer Science and Engineering
UOC6 HPW4

Topics chosen from: Spatial, semi-structured and multi-dimensional data storage and manipulation techniques, non Von-Neumann techniques, advanced and parallel algorithmic techniques, algorithm engineering and problem solving practices; algorithms for matrices and systems of linear equations, approximation algorithms, FFT and convolution and their

software and circuit implementations, iteration methods for the solution of operator equations.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4121

COMP4132**Advanced Functional Programming**

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3131 or COMP9102.

Note: Available to students in CSE programs only.

Programming techniques: combinator libraries, concurrency, monadic programming, graphics and multimedia applications. Implementation techniques: compilation by program transformation, optimisation techniques.

Parallel programming: FP approaches to high performance computing, distributed implementation.

This course will be taught in a seminar format, with students expected to give presentations based on readings of primary and secondary sources. In addition, each student needs to solve a medium sized programming assignment.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4132

COMP4151**Algorithmic Verification**

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: COMP3151 or COMP9151 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course is an Advanced Topics in Concurrency occasional elective; a change of name is expected each year.

Topics will be chosen from: semantics models of concurrent and distributed systems (e.g. process algebra, event structures, Petri nets, Chu spaces), linear versus branching time, interleaving versus partial order semantics, true concurrency, semantic equivalences, modal and temporal logic for concurrent systems (proof theory and applicants), algorithmic verification (model checking, automata on infinite structures, synthesis), reasoning about knowledge in distributed systems.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4151

COMP4161**Advanced Topics in Software Verification**

School of Computer Science and Engineering
UOC6 HPW4

This course is about mechanical proof assistants, how they work, and what they can be used for. It presents specification and proof techniques used in industrial grade theorem provers, teaches the theoretical background to the techniques involved, and shows how to use a theorem prover to conduct formal proofs in practice. The course is intended to bring third/fourth year and postgraduate students into contact with the current research topics in the field of theorem proving and automated deduction and to teach them the necessary skills to successfully use industrial grade verification environments in modelling and verification.

Topics covered included: higher order logic, natural deduction, lambda calculus, term rewriting, data types and recursive functions, induction principles, calculational reasoning, mathematical proofs, decision procedures for a variety of logical domains, and proofs about programs.

Note: experience with (first-order) logic and functional programming is required.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4161

COMP4211**Advanced Architectures and Algorithms**

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: a mark of at least 70 in COMP3211 or COMP9211.

This course builds on an understanding of COMP3211/9211 Computer Architecture to allow advanced features of current general purpose and embedded processors to be appreciated. Related research themes in computer architecture such as multiple issue, instruction level parallelism, dataflow, multiprocessing and multithreading are exposed. The course develops research and presentation skills through readings, presentations, and project work.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4211

COMP4411

Experimental Robotics

School of Computer Science and Engineering
UOC6 HPW5

Prerequisite: Overall WAM of 75 and, 12 units of credit from COMP3### courses or 12 units of credit from COMP9### courses, or enrolment in the postgraduate Autonomous Systems major.

Artificial Intelligence Concepts in Robotics. The approach is experimental, with hands-on experience with a small mobile robot kit. Topics covered will include a selection from: history and philosophy of robotics, hardware components and subsystems, sensors, measurements and perception, robotic architectures, multiple robot systems, localisation problem and solutions, robot learning, navigation and obstacle avoidance, robot planning, robot vision and vision processing.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4411

COMP4412

Introduction to Modal Logic

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: COMP9101 or COMP3121 or COMP2411 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course aims to introduce fourth year and beginning graduate students to modal logic. Modal logic is used widely in computer science to model a variety of systems including databases, communication protocols, software, multi-agency and knowledge systems. This course will address the basic axioms, techniques, model theory of modal logic and some representative applications. This course will be assessed on the basis of student presentations and assignments.

Syllabus: Standard modal axioms such as K, T, 4 and 5. Kripke's possible world semantics. Soundness and completeness. The canonical model theorem. Logics of belief and knowledge. Logics of time and computation. If time permits, filtrations and the finite model property.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4412

COMP4415

First-order Logic

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: COMP9101 or COMP3121 or COMP2411 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course is a presentation of the kind of logic useful for knowledge representation and reasoning. It begins with the elements of first-order logic using tableau methods and proceeds to soundness and completeness, and compactness. Using compactness it addresses issues like expressibility to show, for instance, why transitive closure is not first-order. The course concludes with an introduction to non-monotonic reasoning as a formalization of common sense reasoning.

Note/s: Permission of lecturer in charge is required.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4415

COMP4416

Intelligent Agents

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: a mark of at least 65 in COMP3411 or COMP9414.

Agents are computational entities that act autonomously in a dynamically changing environment in order to achieve their goals. This course covers the foundations, engineering and applications of intelligent software agents, with an emphasis on theories and architectures for rational agents and on personal assistant applications. Topics include modelling intention, BDI (Belief, Desire, Intention) agent architectures, methodologies for engineering multi-agent systems, communication, coordination and negotiation in multi-agent systems, and applications of agents in electronic commerce and interface design.

This course will involve in-depth and intensive reading, and assume a high level of mathematical maturity and critical analysis. Assessment is by participation in class discussion and essay.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4416

COMP4418

Knowledge Representation and Reasoning

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3411 or COMP9414 or COMP4415, and 6 units of credit in COMP3### or COMP9###.

Knowledge Representation and Reasoning (KRR) is at the core of Artificial Intelligence. It is concerned with the representation of knowledge in symbolic form and the use of this knowledge for reasoning. This course presents current trends and research issues in Knowledge Representation and Reasoning (KRR). It enables students interested in Artificial Intelligence to deepen their knowledge in this important area and gives them a solid background for doing their own work/research in this area. The topics covered in more detail are AI Logics, Probabilistic Reasoning, Constraints, and Game Theory.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4418

COMP4431

Computer Game Programming Workshop

School of Computer Science and Engineering
UOC6 HPW2

Prerequisite: COMP3421.

This course is run in conjunction with SOMA3610 Digital Studio. Students will form teams containing programmers (this course), artists and designers (SOMA3610) to create a computer game. There will be invited lectures from the game industry, AI researchers, artists and designers from the College of Fine Arts (COFA) and computer graphics researchers.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4431

COMP4904

Industrial Placement Program

School of Computer Science and Engineering
UOC0

Excluded: COMP4903, COMP4905.

COMP4904 is an optional 6-month industrial work experience, available to students in Computer Engineering, Software Engineering, Bioinformatics programs and for Computer Science students who have completed Year 2 (96 units of credit). COMP4904 satisfies the industrial training requirements for students in Computer Engineering, Software Engineering and Bioinformatics programs.

Students are required to submit to the School evidence from their employers confirming completion of the work experience and a report, typically 2000 words long, summarising the work done and the training received.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4904

COMP4910

Thesis Part A

School of Computer Science and Engineering
UOC3 HPW7

Prerequisite: 126 units of credit, and enrolment in Computer Engineering or Computer Science programs 3645 or 3722 or 3726, 3715 or 3978 Honours

Thesis part A and B are done in the last two semesters of the BE degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of the semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

COMP4911

Thesis Part B

School of Computer Science and Engineering
UOC15 HPW14

Prerequisite: COMP4910.

Thesis part A and B are done in the last two semesters of the BE degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software,

together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of the semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

COMP4920

Professional Issues and Ethics

School of Computer Science and Engineering
UOC3 HPW4

Prerequisite: enrolment in Computer Engineering program 3645, 3715, 3722, 3726, 3728.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page www.cse.unsw.edu.au/~cs4920

COMP9018

Advanced Graphics

School of Computer Science and Engineering
UOC6

Prerequisite: a mark of at least 65 in COMP3421 or COMP9415.

Assumed knowledge: Experience with OpenGL and Java.

This course covers advanced topics in graphics and related technologies with a strong hands-on and interactive focus. Topics include: advanced features of OpenGL; 2D and 3D still, interactive and animated file formats; advanced modelling and animation techniques; detailed surface models; performance optimisation; radiosity; ray tracing and optimisations; Monte Carlo and metropolis rendering; volumetric rendering; image based rendering; interactivity; collision detection and 3D graphics hardware design. Students will be given the opportunity to present seminars on research areas of interest to them, as well as experiment with 3D graphics software.

This course will be extremely interactive. You'll be expected to be involved.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9018

COMP9116

Software System Development Using the B-Method and B-Toolkit

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP2111 or COMP3111 or COMP9008 or enrolment in MIT program 8684 or GradCert program 7344.

The B-Method is a rigorous mathematically based method for the development of reliable software. The method covers the complete software cycle from requirements analysis through specification, design, implementation, testing, maintenance, and re-use. The B-Method is supported by the B-Toolkit: a collection of tools that provide for specification animation, proof obligation generation, theorem proving, configuration management, code generation, and documentation. The B-Method uses similar mathematical notation to Z, but does not use Z. Specifications are given in AMN (Abstract Machine Notation), which is a small abstract programming language. The B-Method is object based in the sense that systems of machines use a number of different forms of inheritance to control visibility and inherit operations. There is no dependence on a particular programming language, but the current code generator generates C.

This course will explore the use of the B-Method and the B-Toolkit. The topics covered will include: The Abstract Machine Notation; Machine Composition; Refinement; Implementation; The method of presentation will use case studies to present the method; laboratory exercises to use the tools; a major project to apply all aspects of the method, and use of the tools.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9116

COMP9117

Architecture of Software Systems

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: an overall WAM of 65, and COMP3111 or COMP9008 or COMP3141, and COMP3131 or COMP9102 or SENG3020, or enrolment in MIT program 8684 or GradCert program 7344.

Principal architectural issues associated with the design and construction of large scale software systems. Study and evaluation of several well-known and frequently used architectural styles, patterns and frameworks.

Study of pipes and filters, layered systems, distributed object-oriented systems, component-based systems, etc. The course will also examine the practical applicability of architecture research, specifically its relationship to the work in software reuse and component interoperability of platforms such as J2EE, Microsoft, NET and CORBA. Case studies and exercises will be used to illustrate the architectural issues.

Note/s: This course is available to students in CSE programs only. There are a limited number of places.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9117

COMP9242

Advanced Operating Systems

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: A mark of at least 75 in COMP9201 or COMP3231.

Covers operating systems design and implementation issues at an advanced level, focussing on specific issues such as performance and on current OS research areas. Topics selected from: Microkernels; user-level servers; performance; kernel implementation; device drivers; scheduling for real-time; effects and control of hardware caches; security and protection; persistent systems; security; dealing with large, sparse address spaces; experimental systems. A laboratory running a state-of-the-art microkernel system will be used to provide hands-on experience with low-level implementation of OS components.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9242

COMP9243

Distributed Systems

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3231 or COMP9201, COMP3331 or COMP9331.

A detailed coverage of distributed systems, with a particular focus on operating systems issues: client-server paradigm, remote-procedure call as OS support for client-server; distributed shared memory, distributed memory coherency; distributed file systems; distributed process management, including load sharing and process migration; concurrency control; fault tolerance, recoverability and distributed transactions; naming; industry standards; case studies.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9243

COMP9314

Next Generation Database Systems

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Detailed examination of current developments and future trends in database, web, and e-commerce technologies. The emphasis will be on the following topics: modeling, querying, and integrating e-catalogs, integration frameworks for B2B EC applications, and web-based databases.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9314

COMP9315

Database Systems Implementation

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Detailed examination of techniques used in the implementation of relational, object-oriented and distributed database systems. Topics are drawn from: query optimisation, transaction management, advanced file access methods, database performance tuning.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9315

COMP9318

Data Warehousing and Data Mining

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Data Warehouse: (a) Data Model for Data Warehouses. (b) Implementing Data Warehouses: data extraction, cleansing, transformation and

loading, data cube computation, materialized view selection, OLAP query processing. Data Mining: (a) Fundamentals: data mining process and system architecture, relationship with data warehouse and OLAP systems, data pre-processing. (b) Mining Techniques and Application: association rules, mining spatial databases, mining multimedia databases, web mining, mining sequence and time-series data, text mining, etc. The lecture materials will be complemented by projects /assignments.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9318

COMP9321

e-Commerce Systems Implementation Infrastructure

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9021 or COMP1021 or COMP1711 or COMP2811; or enrolment in MIT program 8684 or GradCert program 7344; Corequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992; or enrolment in MIT program 8684 or GradCert program 7344.

The goal of this course is to expose students to basic infrastructure for building web-based ecommerce applications. It discusses web application development techniques and enabling technologies including CGI scripts, remote method invocation, servlets, JSPs, Web access to databases, programmatic access to XML documents. The lecture materials will be complemented by several assignments and labs.

Excluded: COMP9316 and COMP9031

Further Information: CSE class page www.cse.unsw.edu.au/~cs9321

COMP9322

e-Commerce Systems Engineering

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9321 or COMP9031 or COMP9316, and COMP9024 or COMP2011, and COMP9311 or COMP3311 or INF3608 or INFS5926 or INFS5992; or enrolment in MIT program 8684 or GradCert program 7344.

This course covers principles, techniques, architectures, and enabling technologies for the development of the different components and layers of complex e-commerce systems (presentation and personalization layer, business logic, message exchange). It discusses: (1) e-commerce transaction models, system architectures and functions, (2) enterprise applications development using J2EEE, (3) Web services and business process modelling, (4) security, transaction, payment protocols for enterprise applications, (5) e-catalogues, (6) inter-enterprise message exchange, and (6) personalization. The lecture materials will be complemented by several assignments and labs

Further Information: CSE class page www.cse.unsw.edu.au/~cs9322

COMP9323

e-Enterprise Project

School of Computer Science and Engineering
UOC6 HPW3

Corequisite: COMP9322.

This course covers principles, techniques, architectures, and enabling technologies for the development of the different components and layers of complex e-Commerce systems (presentation and personalisation layer, business logic, message exchange). In particular, it discusses (1) advanced XML technologies as data exchange/transformation format, (2) a model-driven approach in Web application development, (3) business processes modelling and Web services, (4) business process automation with Web service standards, (5) security, transaction, payment protocols for enterprise applications, and (6) personalisation. The lecture materials will be complemented by several assignments and labs.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9323

COMP9332

Network Routing and Switching

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3331 or COMP9331.

This course will focus on the routing and switching architectures, algorithms and protocols for packet switching networks, both connectionless and connection oriented networks (such as IP and ATM networks). Advanced Internet addressing : CIDR, VPN, NAT. In depth discussion of interior and exterior routing protocols, such BGP, OSPF. IP over ATM solutions : such as LANE, Classical IP over ATM. IP switching and MPLS. Mobile IP. Internet Multicasting. Overview of emerging switching

and routing technologies, such as optical routing and QoS routing. There is a substantial network programming component in the assessable material, for which C programming knowledge is assumed.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9332

COMP9333

Advanced Computer Networks

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3331 or COMP9331.

This course teaches the fundamentals and practical solutions to quality of service (Qos) based networks, with an emphasis on the next generation Internet architectures and protocols. Topics include: scheduling policies (fair queueing, priority queueing etc.), congestion avoidance/control schemes (RED, RIO etc), admission control, multimedia protocols (RTP, RTCP etc).

This course will also cover recent Qos related developments by IETF/IEEE such as : Intserv, Diffserv, RSVP, LAN, Qos. There will be hands on practical labs on network performance measurement and some network programming. The assessment of the course includes a substantial hands on project on building a network system in Linux/FreeBSD environment. C programming knowledge is assumed for labs and the project.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9333

COMP9334

Capacity Planning of Computer Systems and Networks

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP3331 or COMP9331.

Techniques for performance evaluation of distributed systems. These techniques will then be applied to designing systems to have good performance, and to the analysis of future workloads and the system changes required to cope with them.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9334

COMP9416

Knowledge Based Systems

School of Computer Science and Engineering
UOC6 HPW3

Assumed knowledge: COMP9414 or COMP3411.

This course introduces students to the basic concepts in knowledge-based systems and provides practical experience through project work. The topics covered include: knowledge representation and problem solving; knowledge acquisition and machine learning; knowledge level modelling, expert systems lifecycles and expert system shells. A major component of this subject is a project in which students work in 3 teams to build expert systems that act as agents in a competitive simulation game.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9416

COMP9417

Machine Learning and Data Mining

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9024 or COMP2011 or COMP2711 or COMP2091 (or extended versions) or enrolment in MIT program 8684 or enrolment in GradCert program 7344.

Machine learning is the algorithmic approach to learning from data. This course covers the key techniques in data mining technology, gives their theoretical background and shows their application. Topics include: decision tree algorithms (such as C4.5), regression and model tree algorithms, neural network learning, rule learning (such as association rules), lazy learning, version spaces, evaluating the performance of machine learning algorithms, Bayesian learning and model selection, algorithm-independent learning, ensemble learning, kernel methods, unsupervised learning (such as clustering) and inductive logic programming (relational learning)

Further Information: CSE class page www.cse.unsw.edu.au/~cs9417

COMP9444

Neural Networks

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP2011 or COMP2711 or COMP9024, and 12uc COMP3### or COMP4### or COMP9### - excluding Group A, or enrolment in MIT program 8684 or GradCert program 7344.

Topics chosen from: Network architectures: perceptrons, Hopfield and Kohonen nets, ART models, back-propagation trained feed-forward networks, recurrent nets, weightless nets. Computational complexity analysis of training neural network architectures. Probabilistic analysis of generalisation capabilities of feed-forward networks. Hardware based neural nets. Introduction to fuzzy logic, neurotrained nets; designing successful applications of neural networks; tensor product networks; and recent developments in neural networks. The assessment will include a lab project related to application of neural nets.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9444

COMP9515

Pattern Classification

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: COMP9024 or COMP2011 or COMP2711 or COMP2091 (or extended versions) or enrolment in MIT program 8684 or enrolment in GradCert program 7344.

The course has three basic aims: firstly to understand the field of pattern recognition in general, secondly to get familiar with pattern recognition techniques, and thirdly to obtain the ability to apply techniques to applications.

This course is an introduction to the subject of pattern recognition. We will cover theoretical foundations of classification and pattern recognition and discuss applications in character, speech, and other applications. A tentative list of topics includes: Bayesian decision theory, discriminate functions for normal class distributions, supervised learning, unsupervised learning and clustering, Structural and Syntactic pattern recognition, Edit distance, String matching, Statistical pattern recognition, and neural pattern recognition.

Assumed Knowledge for PG: MATH2859 or MATH2801 or MATH2901 or statistical course equivalent.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9515

COMP9517

Computer Vision

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: 12 units of credit from COMP3### or 12 units of credit from COMP9### - excluding Group A.

Cameras and Radiometry, local shading models, ColourVision perception, representation, modelling, linear filters for smoothing, edge detection using convolution, fourier transform, scale and image pyramids, texture, segmentation by clustering, model fitting and probabilistic methods, tracking and Kalman filters, model-based vision, template matching using classifiers, recognition by relations, applications in robotics, medical imaging, satellite image analysis.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9517

COMP9519

Multimedia Systems

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: COMP2011 or COMP2711 or COMP9024, 12uc level 3 or level 4 (for undergrads), or enrolment in MIT program 8684 or GradCert program 7344.

Provides an introduction to multimedia computing and distributed multimedia systems. The subject includes multimedia and agent fundamentals; multimedia application, structures and organization; interactive multimedia software authoring basics; information management issues; and dynamic agent and distributed processing.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9519

COMP9790

Principles of Global Navigation Satellite System (GNSS) Positioning

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: 18 units of credit COMP3### or COMP9### courses, or enrolment in MIT program 8684 or GradCert program 7344; Excluded: GMAT4900.

This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning,

for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, which allows the student to develop algorithms for real and simulated data processing. Land, marine and airborne positioning applications will be discussed.

Physical attendance at the lab class is optional. Students with own copies of MATLAB need not attend, and may do exercises in their own time.

Further Information: See GMAT4900

COMP9791

Modern Navigation & Positioning Technologies

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: 18 units of credit COMP3### or COMP9### courses, or enrolment in MIT program 8684 or GradCert program 7344; Excluded: GMAT4910.

This course presents an overview of the various satellite-based and non-satellite navigation technologies and some of their applications. Various user receiver configurations, system augmentations and implementation issues will be analysed. These include: differential GPS schemes and services, real-time systems and their communication links, pseudo-range and carrier phase-based techniques, pseudolites, and other satellite-based positioning systems. In addition, the role of other sensors (such as gyros, accelerometers and inertial navigation systems - INS) and ancillary data can play in navigation will be discussed. Particular emphasis will be placed on the role such positioning technologies will play in Transport Telematics and for personal location, in relation to Location-Based Services, etc. Students will gain hands-on experience with a variety of navigation technology.

Further Information: See GMAT4910

COMP9844

Extended Neural Networks

School of Computer Science and Engineering
UOC6 HPW3

Prerequisite: (A mark of at least 70 in COMP2011 or COMP2711 or COMP9024) and (12uc COMP3 or COMP4 or COMP9 - excluding Group A) or enrolment in MIT program 8684 or GradCert program 7344.

As for COMP9444 but in greater depth and breadth.

Further Information: CSE class page www.cse.unsw.edu.au/~cs9844

CRIM1000

Criminal Law and Justice 1

School of Social Science and Policy
UOC6 HPW4

Prerequisite: Enrolment in program 3422 Social Science (Criminology)

Introduces students to key processes of criminalisation, criminal law formation, established concepts of criminal law and the operation of criminal justice agencies. Considers forces and criteria behind criminalisation, and justifications for and against the use of criminal law as a mode of regulation. Examines key components of criminal law: conduct, circumstance and consequence, how these are operationalised in specific substantive areas of criminal law doctrine such as homicide and criminal defences. Particular attention will be paid to the criminal processes and the workings of the major criminal justice agencies such as the police, the DPP, defence lawyers, and the courts.

CRIM1001

Criminal Law and Justice 2

School of Social Science and Policy
UOC6 HPW4

Prerequisite: CRIM1000

Emphasises the operationalisation of criminal justice through the workings of key agencies. Examines particular areas of substantive criminal law doctrine and practice such as assault and sexual assault, public order offences, property offences and drugs offences. Examines sentencing and penalty, including justifications for punishment, sentencing options, the rise of retributivism, victim participation, and penal practices. Fosters a reflexive approach to the operation of criminal law and the criminal process, including consideration of the limits of criminal law as a mode of regulation in the light of technological and policy changes, and the blurring boundaries between criminal and civil law.

CRIM2000

Criminological Theories

School of Social Science and Policy
UOC6 HPW3

Prerequisite: CRIM1001

Examines the way in which crime is conceptualised in different theoretical traditions. Introduces students to the historical development of criminology and explores the interconnections between social and political context, criminological theory and crime control policy.

CRIM2014**Policing**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: CRIM1001; Excluded: LAWS2789, LAWX1789

Focuses on policing as a set of social and legal practices and institutions as a resource and as a regulator. Policing is placed in its social and historical contexts by assessing conflicting interpretations of its history and of police public relations. Topics include: police uses of law, the relevance of law to policing, and the effectiveness of statutory and other rules in influencing and controlling police decisions and activities, drug policing, police culture, the policing of social divisions, police corruption and deviance, the policing of public order, fictional representations of policing, investigative methods, developments in community, private and international policing, and the limits and possibilities of police reform.

CRIM2018**Crime, Power & Human Rights: Transnational Organised Crime & State Crime**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: CRIM1001

Many governments and the United Nations now regard combating transnational organised crime as an important national and international security issue, requiring exceptional policing measures which often override standard criminal justice procedures and human rights norms. Examines how criminological theory can be applied to the complex and often contradictory relationship between crime, human rights and the state by providing an overview of the debates regarding transnational and state crime. Topics include globalisation and crime; the war on drugs; the war on human smuggling/trafficking; the war on terror; the dispossession of indigenous communities; genocide; refugees; arbitrary detention and torture.

CRIM3000**Researching Crime and Justice**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: CRIM2000, SLSP2001

Examines the methodological, ethical and legal issues in relation to criminological research through a critical review of published research studies. Topics to be covered include: the availability and quality of official data, uses and abuses of criminal justice statistics, doing research on sensitive topics and vulnerable populations, problems of access, validity issues, ethical practice, political and legal issues.

CRIM3010**Comparative Criminal Justice: From Investigation to Trial**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: CRIM2000 and 30 units of credit at Upper Level

Introduces the aims, objectives and practice of comparative law, and the strengths and limitations of such an inquiry by focusing on aspects of criminal trial practice in various jurisdictions. Critically evaluates our criminal trial process by focusing on a number of themes, including: Bill of Rights; understanding adversarialism and accusatorial justice; inquisitorial or adversarial; transplanting legal cultures; confessions and the right to silence; plea bargaining; jury decision-making and controlling prejudice; double jeopardy.

CRIM4000**Criminology Honours (Research) F/T**

School of Social Science and Policy

UOC24 HPW4

Prerequisite: 48 units of credit in Criminology Core Program and 48 units of credit in Social Science Core Program and SLSP3911 at an average of at least 65% and permission from the Head of School

Students are required to prepare a thesis of between 15,000-20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

CVEN0646**Water and Wastewater Engineering**

School of Civil and Environmental Engineering

UOC3 HPW3

Basic concepts of hydraulics: Fluid properties, hydrostatics, motion of fluids, conduit flow and open channel flow. Scope and applications of hydrology: Hydrologic measurements, rainfall analysis, storm rainfall-runoff relations, flood estimation, surface and groundwater sources, transmission and distribution. Urban drainage design: Relationship between urban development and each of water supply, wastewater and stormwater drainage. Subdivision layouts.

Note: This is a servicing course for other schools.

CVEN0656**Soil and Pavement Engineering**

School of Civil and Environmental Engineering

UOC3 HPW3

Basic properties of soils and soil mechanics; Classification of soils; soil forming processes; seepage of water through soils; shear strengths, bearing capacity, settlement of foundations, stability of slopes and embankments, earth pressures and simple design of retaining walls; Concepts related to land use and transport systems; Pavement design based on engineering classification;

site investigation for pavements, sampling and in-situ testing of subgrades, design practice of urban and rural roads, intersections and interchanges; base and sub-base materials; subgrade space improvement.

Note: This is a servicing course for other schools.

CVEN1021**Civil Engineering Practice 1A**

School of Civil and Environmental Engineering

UOC4 HPW2

Introduction to the structure, nature and scope of civil and environmental engineering. Topics include: history of engineering; engineering today; organisation of the profession; the engineer in society; environmental, social and legal considerations; civil and environmental engineering failures and engineering responsibilities; communication methods and skills; oral presentations; report writing, presentation and expectations; case studies of major projects.

Assumed knowledge: 2 unit HSC English.

CVEN1022**Civil Engineering Practice 1B**

School of Civil and Environmental Engineering

UOC6 HPW4

Following on from CVEN1021, this course introduces student to engineering and its place in society and demonstrates how the various engineering sub-disciplines are integrated in real-world civil engineering projects. The objective is to develop the students' skills in critical thinking, communication, teamwork and research. Topics include: communication methods and skills; oral and written presentations; the conduct of meetings; problem solving; recycling; public participation, including the role of sustainability and the influence of engineering practice, the engineer and the law.

Assumed knowledge: CVEN1021.

CVEN1023**Statics**

School of Civil and Environmental Engineering

UOC4 HPW3

An introductory course in engineering mechanics dealing with conditions of equilibrium of structures and fluids. Topics include: two dimensional concurrent and non-concurrent force systems; resultant of forces; equilibrium of forces; distributed forces; centre of gravity; centroids; internal actions; analysis of beams (shear force and bending moment diagrams); analysis of frames (determinacy, internal hinges); analysis of trusses (methods of joints and sections); cables; fluid statics including hydrostatic pressure, body forces, buoyancy, stability, and manometry; introduction to three dimensional statics.

Assumed Knowledge: 2 unit HSC Mathematics

CVEN1024**Dynamics**

School of Civil and Environmental Engineering

UOC4 HPW3

An introductory course dealing with mechanics of bodies and of fluids in motion. Topics include laws governing continuity, energy and momentum; dynamics of particles; planar motion of rigid bodies and of fluids; ideal fluid flow; simple spring mass systems responding to forces of simple form; applications to civil and environmental engineering problems.

Assumed knowledge: CVEN1023.

CVEN1025

Computing

School of Civil and Environmental Engineering
UOC4 HPW3

A course designed to introduce students to engineering computing, including computer programming; programming using spreadsheets; computer graphics and computer aided drafting (CAD).

Assumed knowledge: Basic computer literacy including the use of PC operating systems, word processors & text editors.

CVEN1026

Engineering Materials 1

School of Civil and Environmental Engineering
UOC4 HPW3

An introduction to the properties and behaviour of civil engineering materials including concrete, steel, other metals, polymers and ceramics. Topics include : (i) Concrete Technology : Cements, aggregates, admixtures, workability, strength and durability; (ii) Metals Technology: Types of materials, mechanical properties of metals, response of metals to loading, creep and fatigue; (iii) Polymers: Classification of polymers, structure of polymers, creep and relaxation, deterioration of mechanisms and durability; (iv) Ceramics: Types of ceramic materials, mechanical and insulation properties and durability.

Assumed knowledge: CHEM1011.

CVEN1531

Introduction to Water and Atmospheric Chemistry

School of Civil and Environmental Engineering
UOC4 HPW4

Chemical species in the atmosphere and natural waters. Air and water pollutants. Basic structural chemistry and its environmental significance. Structural units in organic molecules, their formation and interconversion. Organic pollutants.

Assumed knowledge: CHEM1011.

CVEN1721

Environmental Engineering Practice 1A

School of Civil and Environmental Engineering
UOC4 HPW2

Introduction to the structure, nature and scope of civil and environmental engineering. Topics include: history of engineering; engineering today; organisation of the profession; the engineer in society; environmental, social and legal considerations; civil and environmental engineering failures and engineering responsibilities; communication methods and skills; oral presentations; report writing, presentation and expectations; case studies of major projects.

Assumed Knowledge: 2 unit HSC English

CVEN1722

Environmental Engineering Practice 1B

School of Civil and Environmental Engineering
UOC6 HPW4

Following on from CVEN1721, this course introduces students to engineering and its place in society and demonstrates how the various engineering sub-disciplines are integrated in real-world environmental engineering projects. The objective is to develop the students' skills in critical thinking, communication, teamwork and research. Topics include: communication methods and skills; oral and written presentations; the conduct of meetings; problem solving; recycling; public participation, including the role of sustainability and the influence of engineering practice, the engineer and the law.

Assumed Knowledge: CVEN1721.

CVEN2022

Civil Engineering Practice 2

School of Civil and Environmental Engineering
UOC3 HPW2

Prerequisite: 36 units of credit

The 2nd year integrating course introducing students to the multi-disciplinary nature of real world engineering problems and the relationship of engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of engineering problems. A holistic approach to addressing complex engineering problems, engineering methodology, community participation and public involvement, sustainability, equity and distributional effects. Other topics include introduction to EIS and risk- quantification.

Assumed knowledge: CVEN1021, CVEN1022.

CVEN2023

Mechanics of Solids

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisite: CVEN1023

An introduction to the strengths of materials: properties of sections; concepts of stress and strain; stress-strain relationships; bars under axial force, bending moment, shear force, torsion; deflections due to bending and shear; combined stresses; stresses and strains at a point; principal stresses and strains.

Assumed knowledge: MATH1231.

CVEN2025

Engineering Computations 1

School of Civil and Environmental Engineering
UOC3 HPW3

Graphical data analysis; curve fitting and interpolation; simple and multi-linear regression; random variables and their properties; normal and binomial distributions. Functions of random variables and their simulation using computers; one and two sample interference methods. Risk-quantification; ecological risk assessment. Applied data analysis.

Assumed knowledge: MATH1231, CVEN1025.

CVEN2026

Engineering Materials 2

School of Civil and Environmental Engineering
UOC3 HPW3

The course builds on the concepts of CVEN1026 with topics in concrete technology, metals technology and fibre reinforced polymer composites. Concrete Technology: Mix design, quality control, long term effects (creep and shrinkage); high performance concrete and fibre reinforced concrete. Metals Technology: Volume change; corrosion; various types of steel including stainless steel. Fibre Reinforced Polymer Composites: Matrix materials, types of fibres, density of composites, absorption characteristics, durability and long term mechanical properties.

Assumed knowledge: CVEN1026.

CVEN2125

Systems Engineering

School of Civil and Environmental Engineering
UOC3 HPW2

The formulation and solution of engineering problems and their interfaces with other issues.. An holistic approach to addressing complicated engineering problems. Basic systems concepts applied to Civil and Environmental Engineering. Classification and representation of systems. Modelling of systems. Classification of fundamental systems problems of analysis, synthesis and investigation. Decision making. Allowance for variability and uncertainty. Case studies.

Assumed knowledge: CVEN1022, CVEN1025.

CVEN2126

Engineering Construction 1

School of Civil and Environmental Engineering
UOC3 HPW3

An introduction to elemental processes used in construction. Characteristics, selection and usage of plant and equipment, temporary works and specialist construction techniques. Researching issues associated with construction processes. Topics selected from: earthmoving; temporary works including scaffolding and formwork; dewatering systems; specialist techniques including drilling, compressed air and fluid power systems; explosives and blasting, ground anchors, grouting methods; aggregate production including quarrying, dredging, building construction including foundations, piles, cranes, steel construction, concrete construction and masonry construction; a selection of particular construction activities including dam construction, coffer dams and caissons, tunnelling, pipelines and road, railway and bridge construction.

Assumed knowledge: CVEN1022.

CVEN2222**Geotechnical Engineering 1**

School of Civil and Environmental Engineering
UOC3 HPW3

A course covering an introduction to Geotechnical Engineering and Geology. Topics include: history of the earth; plate tectonics; formation of different soils and rocks; classification of soils and rocks; structural geology and mapping; site investigation concepts and the geotechnical model.

Assumed Knowledge: CVEN1022.

CVEN2322**Structural Engineering 1**

School of Civil and Environmental Engineering
UOC6 HPW6

Prerequisite: CVEN1023

The course consists of an analysis strand and a design strand. Analysis Strand: Revision of Mechanics of Solids; combined stresses and failure theorems. The principles and requirements of structural analysis of indeterminate trusses and simple frames; structural idealisation; determinacy; principles of virtual work; the force method (flexibility analysis). Design Strand: Introduction to limit states design and codes of practice (design objectives; strength; serviceability and durability limit states); loads and load combinations (dead, live, wind and earthquake loads); structural steel; design of tension and stocky compression members; local buckling; Euler buckling; design of laterally supported steel beams; simple steel connections.

Assumed knowledge: CVEN2023.

CVEN2525**Introduction to Water Engineering**

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisite: CVEN1023, CVEN1024.

Review of fluid properties, hydrostatics and manometry; extension of pressure, continuity, energy and momentum concepts introduced in CVEN1023 Dynamics (Bernoulli's equation, momentum flux and force balances); introduction to Navier Stokes Equations; turbulent and laminar flow; velocity profiles; energy losses and gains; pipe systems; boundary layers, skin friction and form drag; pump behaviour and selection; physical models.

Assumed knowledge: CVEN2023.

CVEN2722**Environmental Engineering Practice 2**

School of Civil and Environmental Engineering
UOC3 HPW2

Prerequisite: 36 units of credit

The 2nd year integrating course introducing students to the multi-disciplinary nature of real world engineering problems and the relationship of engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of engineering problems. A holistic approach to addressing complex engineering problems, engineering methodology, community participation and public involvement, sustainability, equity and distributional effects. Other topics include: introduction to EIS; risk-quantification; sources of information on natural and social systems; perception and communication; the media; and other current environmental issues.

Assumed knowledge: CVEN1722, CVEN2025.

CVEN3023**Civil Engineering Practice 3A**

School of Civil and Environmental Engineering
UOC3 HPW2

Prerequisite: 84 units of credit

A project-based course integrating the material learnt in the various sub-disciplines of civil engineering. Multi-disciplinary projects are undertaken and involve the identification of major issues and the development of solutions for open-ended problems including considerations of the environmental, economic and social impacts of the proposed solutions. The objective is to further develop the students' research, teamwork, managerial and self-directed learning skills. This course is focal in Year 3 (S1) of the undergraduate civil engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently.

Assumed Knowledge: CVEN2022.

CVEN3024**Civil Engineering Practice 3B**

School of Civil and Environmental Engineering
UOC3 HPW2

Prerequisite: 84 units of credit

CVEN3024 continues on from CVEN3023. A project based course integrating the material learnt in the various sub-disciplines of civil engineering. This course is focal in Year 3 (S2) of the undergraduate civil engineering program.

Assumed Knowledge: CVEN3023.

CVEN3025**Engineering Computations 2**

School of Civil and Environmental Engineering
UOC3 HPW3

Topics include: Numerical solution of linear and non-linear equations; numerical integration, finite differences; differential equations, boundary value problems, initial value problems; eigenvalue problems; partial differential equations (civil and environmental engineering applications); an introduction to finite element analysis.

Assumed knowledge: MATH2019, CVEN2025.

CVEN3125**Engineering Construction 2**

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisite: CVEN2126.

Construction management issues dealing with resources of people, money, equipment and materials. An introduction to the design, planning and management of construction operations. Researching issues associated with construction operations. Topics include: sustainable construction, recycling, waste and environmental issues; construction site organisation of personnel; construction site layout; materials planning and procurement, suppliers, subcontractors; equipment management and maintenance; maintenance; estimating; work physiology; ergonomics; selected construction operations - design, planning and management.

Assumed Knowledge: CVEN2125.

CVEN3126**Engineering Management 1**

School of Civil and Environmental Engineering
UOC3 HPW3

Basic techniques used in the management of engineering projects and engineering works; purpose and practices of management; management of resources including people, equipment and materials; project, asset and strategic management; management information systems.

Assumed knowledge: CVEN2125.

CVEN3222**Geotechnical Engineering 2**

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisites: CVEN2023, CVEN2222.

An introductory course for fundamental and applied soil mechanics. Topics include: description of soil, clay mineralogy, basic phase relationships, confined and unconfined seepage, principle of effective stress, consolidation theory, stress distribution and settlement.

Assumed Knowledge: CVEN2025.

CVEN3223**Geotechnical Engineering 3**

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisite: CVEN3222.

An introductory course to fundamentals of soil mechanics. Topics include: Mohr circle, failure criterion, strength of soils, soil testing, shear stress-strain behaviour of soils, slope stability, site investigation and mechanics of unsaturated soils.

Assumed Knowledge: CVEN2222.

CVEN3322**Structural Engineering 2**

School of Civil and Environmental Engineering
UOC6 HPW6

Prerequisites: CVEN2023, CVEN2322.

A course consisting of a structural design strand and a structural analysis strand. Design strand: Reinforced concrete elements; revision of limit states, concrete mechanical properties, reinforcement types and properties; durability requirements; behaviour of cross-sections in bending at both service and ultimate loads; ultimate strength analysis and design of cross-sections in both flexure (singly and doubly reinforced, ductility); serviceability analysis and design of beams (cracked section analysis, deflection and crack control); ultimate strength in shear; bond anchorage and curtailment (simple and continuous beams and one-way slabs); short and slender concrete columns (interaction diagrams). Analysis strand: Stiffness method (displacement method) of analysis for beams and frames; second order behaviour of frames; slenderness effects in frames; elastic stability analysis; software applications; moment distribution applied to continuous beams and non-sway frames; plastic analysis of continuous beams.

CVEN3324

Structural Engineering 3

School of Civil and Environmental Engineering

UOC3 HPW3

Prerequisite: CVEN2322

A structural design course dealing with: laterally unsupported steel beams; steel plate girders; steel-beam columns; steel members subjected to biaxial bending; steel connections and detailing; plastic design of steel beams and frames; and timber engineering (including materials, design of simple elements and members, timber connections; domestic construction).

Assumed Knowledge: CVEN3322.

CVEN3438

Transport Planning and Environment

School of Civil and Environmental Engineering

UOC3 HPW3

There are two components of this course. The first deals with environmental acoustics including analytical techniques and procedures for noise impact assessment and control. The second component is concerned with analysis of traffic and transport systems, including the interactions between transportation, land use and the environment. Topics include: definitions and concepts related to land use and transport systems; equation of state; traffic generation; trip distribution; traffic assignment and mode choice; computer modelling of transport systems; assessment of environmental and community impacts.

Assumed knowledge: CVEN2025.

CVEN3448

Transport Engineering

School of Civil and Environmental Engineering

UOC3 HPW3

This course develops skills related to highway design and pavement evaluation. Topics include: introduction to road design including elements, history, terminology and driver influence; route location process; design practice of urban and rural roads, intersections and interchanges; computer aided design; road traffic loadings; sub-grade evaluation; base and sub-base materials; surfacings; pavement design including flexible pavements.

Assumed Knowledge: CVEN2222.

CVEN3526

Water Resources Engineering

School of Civil and Environmental Engineering

UOC3 HPW3

The course introduces the practice of engineering hydrology and its application in water resources management and flood estimation. Topics include: hydrological cycle, climatology, atmospheric circulation, meteorological measurements, precipitation, interpretation of data, streamflow measurement, runoff components, hydrograph analysis, storm runoff and loss rates, rainfall estimation - IFD diagrams and design hyetographs, concepts of flood estimation, deterministic rational method, probabilistic rational method, time-area methods, unit hydrographs concepts.

Assumed Knowledge: CVEN2525, CVEN2025.

CVEN3527

Water Engineering

School of Civil and Environmental Engineering

UOC3 HPW3

Prerequisite: CVEN2525.

The course develops and expands knowledge in hydraulics and hydrology and their application in water engineering. Topics include: open channel flow - specific energy, specific momentum and force, Manning and Chezy equations, uniform flow, subcritical and supercritical flow, hydraulic jumps, gradually varied flow profiles, sediment characteristics, Shields diagram, bedform, sediment stability, channel side slopes, suspended sediment, fluvial sediment transport capacity estimators, groundwater, hydraulic conductivity, Darcy's Law, intrinsic permeability, water potential, hydraulic head, unsaturated zone, aquifers, aquicludes, aquitards, steady state flow, transient flow, effective stress, transmissivity, storativity.

Assumed Knowledge: CVEN3526.

CVEN3531

Principles and Applications of Aquatic Chemistry

School of Civil and Environmental Engineering

UOC3 HPW3

Prerequisites: CHEM1011, CVEN1531.

Basic thermodynamic and kinetic concepts are extended in this course to enable analysis of complex aqueous systems typical of surface water, ground water and marine environments. The principles of acid-base behaviour, solid dissolution and precipitation, complexation, oxidation and reduction and interactions at solid surfaces are presented such that problems pertaining to natural system behaviour, water quality degradation and water and wastewater treatment can be coherently addressed. A problem solving approach is emphasised.

CVEN3723

Environmental Engineering Practice 3A

School of Civil and Environmental Engineering

UOC3 HPW2

Prerequisite: 84 units of credit

A project-based course integrating the material learnt in the various sub-disciplines of environmental engineering. Multi-disciplinary projects are undertaken and involve the identification of major issues and the development of solutions for open-ended problems including considerations of the environmental, economic and social impacts of the proposed solutions. The objective is to further develop the students' research, teamwork, managerial and self-directed learning skills. This course is focal in Year 3 (S1) of the undergraduate environmental engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently.

Assumed Knowledge: CVEN2722.

CVEN3724

Environmental Engineering Practice 3B

School of Civil and Environmental Engineering

UOC3 HPW2

Prerequisite: 84 units of credit

CVEN3724 continues on from CVEN3723. A project-based course integrating the material learnt in the various sub-disciplines of environmental engineering. This course is focal in S2 of Year 3 of the undergraduate environmental engineering program reinforcing the material covered in the courses being undertaken concurrently.

Assumed Knowledge: CVEN3723.

CVEN3725

Waste Management

School of Civil and Environmental Engineering

UOC3 HPW3

An introduction to waste management, from generation to treatment and disposal; including waste characterisation, waste minimisation, waste treatment and landfill design. Wastes generated in urban economies are the focus of the course, but mining and contaminated sites may also be included.

Assumed Knowledge: CVEN2222.

CVEN3726

Environmental Policy, Law and Economics

School of Civil and Environmental Engineering

UOC3 HPW3

An introduction to environmental policies at a range of institutional levels, including sustainable development principles; implementation of environmental policies by regulatory action at international, national, state and local levels; introduction to a range of environmental economic

analytical tools, and implementation of environmental policies by market mechanisms.

CVEN4000

Honours Thesis Part A

School of Civil and Environmental Engineering
UOC6

Prerequisite: 132 units of credit completed and WA of 62.

The thesis may describe directed laboratory, investigatory, design, field or research work on an approved subject and will be completed under the guidance and supervision of a member of the academic staff. This subject must be satisfactorily completed by all students wishing to obtain an honours degree.

Prerequisite: Only students having a weighted average as set by the School (currently > 62%) in all courses in Years 1, 2 and 3 will be permitted to undertake the honours thesis. All courses to the end of Year 3 in the discipline of the thesis topic.

CVEN4001

Honours Thesis Part B

School of Civil and Environmental Engineering
UOC4

Prerequisite: CVEN4000

Part B of the honours thesis. Course description as for CVEN4000.

CVEN4027

Civil Engineering Practice 4A

School of Civil and Environmental Engineering
UOC6 HPW4

Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in the areas of structural and geotechnical engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

CVEN4028

Civil Engineering Practice 4B

School of Civil and Environmental Engineering
UOC6 HPW4

Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in structural engineering, construction and management. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

CVEN4029

Civil Engineering Practice 4C

School of Civil and Environmental Engineering
UOC6 HPW4

Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in water, geotechnical and transport engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

CVEN4126

Engineering Management 2

School of Civil and Environmental Engineering
UOC3 HPW3

Tools and knowledge needed by engineering managers. Topics chosen from contracts management and administration; legal matters and professional practice; engineering economics and financial management; management of international projects; marketing; managing professional services.

Students are required to complete a minimum of 60 working days of approved industrial training, submit a report on this training before Week 4 of Session 1 Year 4, and to present a seminar during S1 outlining their industrial training experiences.

Assumed knowledge: CVEN3126.

CVEN4139

Advanced Construction and Project Management

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisite: CVEN3126, CVEN4126

Advanced construction technology topics and topics in the planning, design, organisation, coordination, staffing, administration, control and management of construction and allied projects.

CVEN4149

Professional Level Project Management Tools and Skills

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisite: CVEN3126, CVEN4126

Professional level construction and project management skills and techniques.

CVEN4159

Advanced Construction Technology and Engineering

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisite: CVEN3126, CVEN4126

State-of-the-art work associated with selected advanced topics in construction technology and engineering.

CVEN4225

Geotechnical Engineering 4

School of Civil and Environmental Engineering
UOC3 HPW3

Prerequisite: CVEN3222.

Theoretical and presumptive bearing capacity of shallow and deep foundations including pad, raft and piled foundations. Allowable settlement of foundations on soil and rock. Foundation construction including dewatering, temporary support, soil boring and pile driving. Special foundations for expansive soils and rock. Lateral earth pressures and retaining wall design.

Assumed Knowledge: CVEN3223.

CVEN4269

Environmental Geotechnics

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisites: CVEN3223, CVEN4225.

Geotechnical design of landfills; contaminant migration in soils; remediation of contaminated sites. Mine waste management, including tailings disposal and acid mine drainage.

CVEN4279

Rock and Slope Engineering

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisites: CVEN3223, CVEN4225.

Description of rock mass and discontinuities; rock strength and failure criteria. Core logging; field data collection, mapping and fracture surveys; data presentation; hemispherical projections; introductory rock slope stability; foundations on rock; excavation of rock; in-situ stress; stresses about underground openings; classification systems and tunnel support requirements; site investigations for landslides and slope stabilisation techniques; use of slope stability analysis programs. The course includes a compulsory 3 day field trip.

CVEN4289

Site Investigations and Dam Engineering

School of Civil and Environmental Engineering
UOC4 HPW3

Prerequisites: CVEN3223, CVEN4225.

A general review of foundations, dewatering and temporary support system, and parameters required for design of foundations, slopes and other structures. The influence of geology on geotechnical behaviour of soil and rock; weathering processes and profiles in valleys, site

investigation techniques - test pitting, drilling and water pressure testing; in-situ testing methods - SPT, CPT, vane shear, site investigation examples; laboratory shear strength testing and selection of design parameters; peak and residual strengths; triaxial and direct shear test; zoning of embankment dams. Design of seepage control, and design, specification and construction of filters for dams. Stability analysis for embankment dams. Foundation preparation, cleanup, grouting, specification and quality control for embankment dams.

CVEN4299

Advanced Topics in Geotechnical Engineering

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisites: CVEN3223, CVEN4225.

Topic 1 plus either of Topics 2 or 3 will be offered in any one year. Topic 1: An introduction to the fundamentals of critical state soil mechanics and soil plasticity. Topic 2: Advanced pavement engineering. Topic 3: Application of computer simulation techniques to geotechnical engineering problems.

CVEN4323

Structural Engineering 4

School of Civil and Environmental Engineering

UOC3 HPW3

Prerequisite: CVEN3322.

The course deals with the design and behaviour of the following: one-way and two-way reinforced concrete slabs (including the Direct Design Method and the Equivalent Frame Method of analysis); retaining walls; footings; prestressed concrete beams and one-way slabs; and prestressed concrete anchorage zones.

Assumed Knowledge: CVEN3324.

CVEN4339

Design of Bridges

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Fundamentals of bridge engineering (site selection; bridge type selection; standard superstructures and substructures; bridge hydraulics; bridge form); bridge codes; load distribution in bridges; preliminary design considerations for simply supported beam-and-slab and box girder bridges, continuous beam-and-slab bridges, cable-stayed bridges.

CVEN4349

Special Topics in Concrete, Steel and Composite Structures

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Topics will be selected from the following. Concrete Structures: The art of detailing; design for torsion; yield line design; strut and tie modelling; time effects; design of continuous prestressed concrete beams. Steel Structures: Plastic analysis and design of steel structures. Composite Steel-Concrete Structures: concrete filled steel tubes; connections, beam-slab systems; longitudinal shear and slip.

CVEN4359

Structural Analysis and Finite Elements

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Application of finite elements to structural problems. Topics will be selected from 2D membrane elements and their application to shear walls and panels subject to in-plane loading; plate elements and their application to floor slabs and panels subject to out-of-plane loading; buckling analysis using finite elements; output checking.

CVEN4439

Transport Operations and Systems Design

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN3438

This course covers advanced topics on transport operations and design. Topics include: application of mathematical approaches to the operational characteristics of different modes of transport, congestion analysis, graphical and simulation techniques, network theory and queueing theory applications to ports, airports and railyards. Case studies related to ferry services, bus operations and freight transport are also covered.

CVEN4449

Traffic Management and Control

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN3438

An advanced course covering traffic management and control. Topics include traffic studies and capacity, integrated urban traffic management, arterial road traffic management measures and devices, traffic signal timing calculations, history, basic concepts, current signal setting practice, and intersection analysis with the SIDRA software package.

CVEN4459

Transport and Environment

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN3438

This course covers advanced topics on transport planning in the context of integration of land-use, transport and environmental consideration. Topics include the land use/transport/environment, trip generation, trip distribution, modal split, route choice modelling, traffic assignment, economic evaluation of transport and environmental impacts of transport.

CVEN4526

Water and Wastewater Treatment

School of Civil and Environmental Engineering

UOC3 HPW3

Prerequisites: CHEM1011, CVEN2525

The course introduces public health engineering, including water supply and wastewater disposal systems, water and wastewater treatment, water quality and contamination indicators. Topics include water quality parameters; unit operations in treatment of water and wastewater; potable water distribution systems; sewage collection systems; and stormwater systems.

Assumed Knowledge: CVEN3527.

CVEN4533

Transport and Fate of Pollutants

School of Civil and Environmental Engineering

UOC3 HPW3

Topics include pollutant sources; spreading of substances in air, water and groundwater environments; transport processes in rivers, estuaries, lakes and coastal waters; quantification of a groundwater resource, its sustainability and possible contamination.

Assumed knowledge: CVEN3525.

CVEN4539

Advanced Water Quality and Treatment

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN4526.

Topics will be selected from the area of water quality and treatment. Topics may include water and wastewater treatment; water quality in rivers, lakes, reservoirs, estuaries, and coastal waters; catchment processes and management; water quality modelling.

CVEN4549

Advanced Catchment and Coastal Processes

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN4526.

Topics will be selected from the area of catchment and coastal processes. Topics may include catchment processes and management; rainfall and flood estimation with reservoir yield analysis; groundwater systems; stormwater systems; fluvial processes and river engineering; coastal processes, coastal engineering and coastal zone management.

CVEN4559

Advanced Water Engineering

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisites: CVEN3526, CVEN3527.

Topics will be selected from the area of hydraulic and hydrologic systems. Topics may include hydraulic structures; groundwater investigations; hydrological data, analysis and risk assessment; stormwater control structures; computational hydraulics.

CVEN4569**Advanced Environmental Systems**

School of Civil and Environmental Engineering

UOC4 HPW3

Prerequisite: CVEN4526.

Topics will be selected from the area of environmental systems and management. Topics may include environmental material accounting techniques; waste management; environmental risk assessment; groundwater system contamination; site remediation; microbiology; water quality in rivers, lakes, reservoirs, estuaries, and coastal waters; water quality modelling.

CVEN4727**Environmental Engineering Practice 4A**

School of Civil and Environmental Engineering

UOC6 HPW4

Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solutions to real world environmental engineering problems in the areas of chemical engineering, water and wastewater treatment, and environmental management. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

Assumed Knowledge: CVEN3723, CVEN3724.

CVEN4728**Environmental Engineering Practice 4B**

School of Civil and Environmental Engineering

UOC6 HPW4

Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solution to real world environmental engineering problems in the areas of groundwater, environmental geotechnics and waste engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

Assumed Knowledge: CVEN3723, CVEN3724.

CVEN4729**Environmental Engineering Practice 4C**

School of Civil and Environmental Engineering

UOC6 HPW4

Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solutions to real world environmental engineering problems in water, geotechnical and transport engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

Assumed Knowledge: CVEN3723, CVEN3724.

DANC1001**Dance Styles 1**

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: Enrolment in program 3408

Establishes the basis by which students acquire a technical mastery over their bodies and involves the study of two essential dance styles: Classical Ballet and Modern Dance.

DANC1002**Dance Styles 2**

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001

Extends the student's acquisition of technical mastery over the body begun in Dance Styles 1.

DANC1101**Anatomical Foundations of Dance Education**

Media, Film and Theatre

UOC6 HPW3

Prerequisite: Enrolment in program 3408

Studies the basic principles of anatomy as a foundation for the understanding of human movement and function.

DANC1102**Teaching Safe Dance**

Media, Film and Theatre

UOC6 HPW3

Prerequisite: DANC1101

Provides the knowledge essential to a detailed analysis of dance technique in order to allow safe class construction and instruction. Injury prevention is a primary concern.

DANC2000**Dance Analysis and Composition 1**

Media, Film and Theatre

UOC6 HPW4

Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: THST2140, PFST2000

Studies (a) a range of systems and methods of analysing dance, leading to a comprehensive understanding of the ways in which movement makes meaning and (b) an introduction to dance making and the fundamentals of dance composition.

DANC2002**Theatre Production**

Media, Film and Theatre

UOC6 HPW4

Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: PFST2002

Addresses the question of how theatre and dance are presented and produced, provides the comprehensive theoretical basis involved in staging a production, along with practical experience in selected areas of production.

Note: Students should be aware that this course involves at least 20-30 extra hours of production time. This includes some weekday timeslots, and up to 5 evenings. Please check with the Staff Contact for exact dates and times.

DANC2005**Dance Analysis and Composition 2**

Media, Film and Theatre

UOC6 HPW4

Prerequisite: DANC2000 or PFST2000; Excluded: PFST2005

A detailed study of the nature and role of composition in dance and the relationship between composition and the process and product of choreography.

Note: Composition workshops are of a highly practical nature. Students must be prepared to spend time outside of class working with peers on composition tasks.

DANC2007**History of Dance**

Media, Film and Theatre

UOC6 HPW4

Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: DANC2001, PFST2002

Explores the nature and historical background of dance as an art form and as musical theatre. The emphasis is on major events and figures in Western European, American and Australian ballet, modern and jazz dance.

DANC2103**Dance Styles 3**

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001, DANC1002

Course requires a demonstration of skill and competence in Classical Ballet, Modern Dance and Jazz Dance.

DANC2104**Dance Styles 4**

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2105

Dance Styles 5

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2106

Dance Styles 6

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2107

Dance Styles 7

Media, Film and Theatre

UOC6 HPW7.5

Prerequisite: DANC1001, DANC1002

This course is the last in a carefully sequenced and graded series involving a range of styles. Students will be expected to display a high level of technical mastery over their bodies.

DANC2201

The Teaching-Learning Process in Dance

Media, Film and Theatre

UOC6 HPW4

Prerequisite: DANC1001, DANC1002

Introduces students to pedagogy in general and considers how dance may best be taught in the context of the Australian secondary school system.

DANC2203

Dance Teaching Practice

Media, Film and Theatre

UOC12

Prerequisite: DANC2209

Teaching experience consists of 40 days experience in a New South Wales secondary school. Students observe lessons conducted by experienced teachers and plan and deliver lessons for a number of classes, under the direction of supervising teachers. Students also become familiar with organisational aspects of a high school and activities other than those related to subject delivery, for example, school policies and general supervision of school students.

Note: This course is a formal requirement of the BA(Dance)BEd program.

DANC2209

Dance Method A

Media, Film and Theatre

UOC3 HPW2

Prerequisite: DANC1102, DANC2201; Excluded: DANC2210

Students are given a wide range of practical dance activities that will enable them to implement all levels of the NSW Syllabuses. They will examine the national Curriculum Document and investigate ways of integrating dance with the other major arts areas.

DANC2211

Dance Method B

Media, Film and Theatre

UOC3 HPW2

Prerequisite: DANC2209

This course, which extends and develops the work of Dance Method A, deals with the application of the experiences gained in schools towards the profession of teaching dance.

DANC4000

Dance Honours (Research) Full-Time

Media, Film and Theatre

UOC24 HPW5

Prerequisite: 54 units of credit in DANC/FILM/PFST/THFI/THST courses with an average of 65% in DANC

Students are required to undertake an original piece of research extending throughout the year and to submit a thesis of 20,000 words based upon it and to undertake a seminar in research method and complete a practical project accompanied by a written exegesis.

DANC4050

Dance Honours (Research) P/T

Media, Film and Theatre

UOC12 HPW3

Prerequisite: 54 units of credit in DANC/FILM/PFST/THFI/THST courses with an average of 65% in DANC

Students are required to undertake an original piece of research extending throughout the year and to submit a thesis of 20,000 words based upon it and to undertake a seminar in research method and complete a practical project accompanied by a written exegesis.

ECON1101

Microeconomics 1

School of Economics

UOC6 HPW3

Introduces economics as a social science: scarcity, resource allocation and opportunity cost; an introductory analysis of consumer behaviour; the economics of firms and markets; production and costs; the classification and analysis of markets; efficiency concepts and market failure; the gains from international trade and the impact of trade restrictions; economic growth and structural change.

ECON1102

Macroeconomics 1

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Provides an introduction to the analysis of aggregate output, employment and economic growth and their relationship to the policy issues of unemployment, inflation and the balance of payments. Other topics include: social accounting and aggregate income and expenditure analysis; macroeconomic models of income determination; consumption and investment functions; the role of money and financial institutions; interactions between goods and money markets in equilibrium and disequilibrium situations; and an analysis of recent Australian macroeconomic experience.

ECON1107

Elements of Environmental Economics

School of Economics

UOC6 HPW3

Excluded: ECON1101

This course provides an introduction to environmental issues, market failure, conservation and preservation of environment, discounting, sustainable economic growth and zero growth, measuring benefits and costs on environment, methods of controlling pollution, and management of environment.

ECON1202

Quantitative Methods A

School of Economics

UOC6 HPW3

Excluded: MATH1031, MATH1011, MATH1021, MATH1131, MATH1231, MATH1141, MATH1241, ECON2291

This course examines: mathematics of finance: (compound interest, present value, annuities); matrix algebra: (operations with matrices, determinants, matrix inverse, rank, solutions to matrix equations); the graphical approach to linear programming; calculus: (univariate differentiation, maxima and minima of a function, functions of several variables, partial derivatives, unconstrained and constrained optimisation) and the applications of the above concepts and techniques in accountancy and economics, including the use of spreadsheet computer programs.

Assumed Knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed for this course.

ECON1203

Quantitative Methods B

School of Economics

UOC6 HPW3

Prerequisite: ECON1202; Excluded: ECON2292, MATH1041, MATH2801, MATH2841, MATH2901.

Course topics include: frequency distributions; measures of central tendency; dispersion and skewness; introduction to probability theory; the binomial distribution; the poisson distribution; the normal distribution; point estimation of population parameters and confidence intervals; hypothesis tests; the t and chi square distributions; bivariate regression; estimation; and hypothesis testing.

ECON1301

Australia in the Global Economy

School of Economics

UOC6 HPW3

Excluded: ECOH1301, PECO1001

This course looks at the international economy at the end of the 19th century (trade, factor flows, and payments arrangements); problems of the international economy between the wars; the impact of World War II and the international economy in the post-war era; and Australian economic development and its relationship with the international economy in terms of economic fluctuations, problems of the inter-war period, growth of manufacturing, government policy and action, the importance of the mining industry, economic development and the distribution of income and wealth.

ECON1302

Australia and the Asia-Pacific Economies

School of Economics

UOC6 HPW3

Excluded: ECOH1302

This course focuses on Australia's economic relations with the countries of Asia and the Western Pacific since the 19th century, with particular emphasis on the period since the Second World War. Topics include: capital and trade flows, labour and immigration issues; the changing political structures; Australian colonial rule and economic development in Papua and New Guinea; the rise to economic power of Japan and its relations with Australia before the Second World War; resurgence of Japan in the 1950s and its dominance of Australia's trade; future relations with Japan; the emergence of the newly industrialising nations in Asia and their impact on Australia; the ASEAN group's special relationship with Australia; Sino-Australian economic relations; trans-Tasman economic integration; Australia's perceptions of Asia and the Pacific and obstacles to greater economic integration.

ECON2101

Microeconomics 2

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Economists believe that in a perfect world, with perfect information, under certain conditions, markets will allocate goods efficiently. Usually, markets do not function in this way. Firms may have market power, which they will exert in strategic ways to influence their rivals to gain advantage. Imperfect information presents a series of problems for firms, consumers and households, particularly for insurance and labour markets.

ECON2102

Macroeconomics 2

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

This course covers models of aggregate income determination in open economies; theories of aggregate economic behaviour with respect to consumption and investment expenditures and financial transactions; balance of payments and exchange rate analysis; theories of inflation and unemployment; introductory dynamic analysis; and theories of growth and cycles.

ECON2103

Business and Government

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

This course examines how government affects the business environment at the microeconomic level. The effects on business of government instrumentalities such as the Productivity Commission and the Australian Consumer and Competition Commission are examined. Issues relating to microeconomic reform, economic rationalism, market failure and government business enterprises are explored.

ECON2104

Applied Macroeconomics

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

This course examines the big-picture issues that affect households, businesses and governments. The emphasis is on practical approaches rather than theoretical models. Topics include living standards, economic growth and inflation, the business cycle and economic forecasting, fiscal and monetary policy, the balance of payments, exchange rates, and employment and welfare policy.

ECON2105

Economics of Corporations

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Examines the economics of internal organisations in firms, corporations and other formal organisations. Addresses questions such as: why do organisations arise in market economies, how are incentives designed in organisations, how do organisations coordinate the decisions of many diverse agents, how does organisational design affect business strategy? Issues of transaction cost economics, informational economics and principal-agent theory are discussed.

ECON2109

Economics of Natural Resources

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Provides an introduction to the exploitation of natural resource systems examined within an economic framework, particularly forestry, fisheries, water, oil and other minerals. Also looks at policies required to ensure improved management without overexploitation of these renewable and non-renewable resources under different property-right regimes.

ECON2111

Globalisation

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

This course analyses economic issues relating to the global economy and the effects of economic events on nations, with special emphasis on the effects of trade and economic interdependence on growth, welfare and the standard of living. It covers motives for tariff and non-tariff barriers, and the effects of strategic protection of high productivity industries, and the effects of new technologies. It also examines the consequences of increasing global interdependence on wages, with particular attention to different occupations and skill levels in the labour force. Students will also study issues facing the WTO, especially conflicts between international trade and the environment, human rights and labour standards.

ECON2112

Game Theory and Business Strategy

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Outlines the basic tools and concepts in game theory and explores its applicability to a wide variety of real business situations. Business decision-making is inherently strategic and game theory shows what outcomes occur when agents interact strategically with one another. Applications from auction theory, industrial organisation, labour and environmental economics and public policy are examined.

ECON2113

Economics of E-Commerce

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Electronic commerce is radically altering economic activities and the social environment. It affects large sectors of the economy, such as communications, finance, retail trade, education, health and government. It affects the way that businesses interact. This course examines the impact of e-commerce, and the way that business should behave strategically in this new environment. The topics covered include, (with case studies), the planning of product lines of information goods, the development of value-maximising pricing strategies, the management of intellectual

property rights, the strategic implications of lock-in and switching costs, and strategic choice in relation to government policy and regulation. Implications for international trade patterns and taxation policy are also explored.

ECON2116

Economics of Japanese Business and Government

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

This course introduces a number of important facts concerning Japanese business and government and analyses them by applying theoretical frameworks and concepts such as game theory and comparative institutional analysis. This approach provides ways for understanding interconnections among a variety of Japanese-style business and labour market practices as well as tools for evaluating the effectiveness of Japanese industrial policy. Topics include: internal labour market; employment practices; work organisations; industrial relations; manufacturer-suppliers relationships; industrial policy (competition vs. collusion; R&D policy; protectionism).

ECON2117

Economics of Tourism

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

Topics include: macro and micro economic environments; factors affecting international and domestic tourism; tourism forecasting models; economic analysis of projects; cost-benefit and related procedures; and the implications of tourism developments for the community in general.

ECON2127

Environmental Economics

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Considers the main elements of environmental economics and cost-benefit analysis as it relates to the assessment of environmental issues. Topics include: pollution and pollution policy; environmental cost-benefit analysis and economic methods for measuring costs and benefits; species extinction and irreversibility; environmental ethics and discounting; the environment and developing countries; and the sustainable economy.

ECON2206

Introductory Econometrics

School of Economics

UOC6 HPW3

Prerequisite: ECON1203

This course introduces econometrics and explores the representation of economic relationships by simple and multiple regression models; static and dynamic models; and the statistical complications of autocorrelation, collinearity, and heteroskedasticity. Practical computer applications feature throughout.

ECON2207

Econometric Methods

School of Economics

UOC6 HPW3

Prerequisite: ECON2206

This course covers estimation of econometric models using cross-section data, discrete choice models, and instrumental variable estimators. Practical computer applications feature throughout.

ECON2209

Business Forecasting

School of Economics

UOC6 HPW3

Prerequisite: ECON1203

This course looks at the use of econometric and statistical techniques relevant to forecasting in a business environment and computer implementation of the methods. Short-term forecasting using time series analysis; long-term forecasting with S-shaped growth curves and trend analysis. The study of applied work is emphasised in this non-specialist course.

ECON2215

Statistics for Econometrics

School of Economics

UOC6 HPW3

Prerequisite: ECON1203; Excluded: MATH2801, MATH2901, MATH2841, BEES2041

Statistical distribution theory: moments, normal, T, chi-square, F, and multivariate normal distributions. Basic asymptotic theory. Approaches to estimation and significance tests in univariate and multivariate models.

ECON2291

Quantitative Methods A (Arts)

School of Economics

UOC6 HPW3

Excluded: ECON1202, MATH1011, MATH1021, MATH1031, MATH1131, MATH1141, MATH1231, MATH1241

This course examines: mathematics of finance: (compound interest, present value, annuities); matrix algebra: (operations with matrices, determinants, matrix inverse, rank, solutions to matrix equations); the graphical approach to linear programming; calculus: (univariate differentiation, maxima and minima of a function, functions of several variables, partial derivatives, unconstrained and constrained optimisation) and the applications of the above concepts and techniques in accountancy and economics, including the use of spreadsheet computer programs.

Assumed Knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

ECON2292

Quantitative Methods B (Arts)

School of Economics

UOC6 HPW3

Prerequisite: ECON2291; Excluded: ECON1203, MATH1041, MATH2801, MATH2841, MATH2901

Course topics include: frequency distributions; measures of central tendency; dispersion and skewness; introduction to probability theory; the binomial distribution; the poisson distribution; the normal distribution; point estimation of population parameters and confidence intervals; hypothesis tests; the t and chi square distributions; bivariate regression; estimation; and hypothesis testing.

ECON2313

Australian Economic Development

School of Economics

UOC6 HPW3

Prerequisite: ECON1102 Excluded: ECON2313

This course examines the development of the Australian economy from the Long Boom and the Depression of the 1890s to the present day. It looks at Australian economic development and its main features: economic fluctuations and their consequences, especially the Depression of the 1930s; the rise of Australian economic institutions; changes in the philosophy of development and the role of government; migration and the inflow of foreign capital; development strategies of the States; impact of war; growth of manufacturing and industry policy; development of the services sector; problems of the agrarian economy; and changes in the standard of living. Also considered is Australia's changing economic relations with other countries and the world economy, and economic problems in the later 20th century in a historical perspective.

ECON2322

European Integration

School of Economics

UOC6 HPW3

Prerequisite: ECON1102 Excluded: ECON2322, EURO2600

The objective of the course is to impart a knowledge and understanding of the institutions, current policies and likely directions of economic and social change within the European Union. This involves consideration of nation states which, through historical circumstances, have created differing institutional and policy directions (and in the case of Eastern Europe a different socioeconomic system) that now are in the course of being melded. Specific topics considered include the process towards a single market; the problems and implications of monetary integration; the trade distortions arising from the Common Agricultural Policy; the collapse of the Soviet system and the widening of the European Union; the operation of European multinationals; the process of privatisation in Europe; and European integration in relation to Australia and Asia. The

course is of relevance not only to those interested in European issues. It also has implications for other regional arrangements (ASEAN and NAFTA) which are at an earlier stage in the integration process.

ECON3101**Markets and Public Choice**

School of Economics

UOC6 HPW3

Prerequisite: ECON2101

Considers the theory of various types of market failure including uncertainty, property rights problems and congestion, and the role of government in measuring, correcting and restructuring markets to remedy these problems.

ECON3104**International Macroeconomics**

School of Economics

UOC6 HPW3

Prerequisite: ECON2102

This course considers topics in international macroeconomics, including nominal and real exchange rates, international capital markets and capital mobility, international business cycles, policy coordination and the international monetary system, financial crises and currency unions.

ECON3105**Economic Analysis of Productivity**

School of Economics

UOC6 HPW3

Prerequisite/s: ECON2101 or ECON2105, ECON2112

Provides an economic analysis of the concept of productivity. What is productivity? Why does it matter? How can we measure it? Topics to be covered include; the microeconomic foundations of productivity levels and productivity growth, the measurement of productivity and empirical studies of productivity measurement for Australia and overseas countries.

ECON3106**Public Finance**

School of Economics

UOC6 HPW3

Prerequisite: ECON1101

Topics covered include: general aspects of public sector expenditure and its financing with special reference to Australia; the role of government in the economy; principles and types of public expenditure; taxation theory, tax sharing and revenue systems; economic and welfare aspects of different types of taxes; inflation and tax indexation; loan finance and the public debt.

ECON3107**Economics of Finance**

School of Economics

UOC6 HPW3

Prerequisite: ECON2101

Provides a treatment of the microeconomic foundations of modern finance. Many valuation or pricing formulas in modern finance are derived from the requirement that arbitrage profits are non-existent in properly functioning capital markets. The aim of the course is to show that the valuation formulas used in modern finance can also be derived from the microeconomic theory of markets in general equilibrium. Begins with a discussion of how economics agents make decisions when some aspect of the economic environment in which they operate is uncertain. This entails a discussion of expected utility theory and stochastic dominance, which form the cornerstone of modern financial economics. Asset pricing models are developed within the context of general equilibrium portfolio choice problems. The notion that uncertainty in the economic environment can be dealt with by the introduction of state-contingent securities and that these securities lead to efficient market outcomes is fully discussed. The microeconomic theory underlying the determination of firms' value is developed. This leads to a discussion of the Modigliani-Miller proposition that the capital structure of the firm is irrelevant in determining its value. The course concludes with a discussion of the implications of informational asymmetries for financial theories, with particular emphasis on insurance markets.

ECON3109**Economic Growth, Technology and Structural Change**

School of Economics

UOC6 HPW3

Prerequisite: ECON2101 or ECON2103 or 48uoc in Arts and Social Science; Excluded: INST3301

The process of economic development is never smooth. It is associated with profound changes in the fundamental structure of economic society. The rate of growth and development varies substantially between different economies. The course seeks to explain the factors that determine how societies grow and develop, with special emphasis on the role of technology and finance. Various approaches will be examined, and attention will be paid to problems associated with growth, including those relating to equity and human rights issues.

ECON3110**Development Economics**

School of Economics

UOC6 HPW3

Prerequisite: ECON2101 or ECON2103 or 48uoc in Arts and Social Science

This course provides an in-depth introduction to different theories of underdevelopment and the associated strategies for fostering development, with emphasis on more recent perspectives. It investigates the role of institutions, institutional change, and markets as they relate to development, and discusses accompanying domestic and international economic policy questions. Much of the material is near the interface between economics and the other social sciences.

ECON3112**The Newly Industrialising Economies of East Asia**

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

This course focuses on the principal economic characteristics of the newly industrialising economies of East Asia; South Korea, Taiwan and Hong Kong, and compares internal and external policies and their contribution to the achievement of socio-economic objectives.

ECON3113**Economic Development in ASEAN Countries**

School of Economics

UOC6 HPW3

Prerequisite: ECON1102

Analyses principal economic characteristics of the original members of the Association of South East Asian Nations: Indonesia, Malaysia, Philippines, Singapore and Thailand. Looks at causes and consequences of economic development policies, the theoretical issues related to formation of customs unions and free trade areas, and their application to ASEAN.

ECON3114**Superannuation and Retirement Benefits**

School of Economics

UOC6 HPW3

Prerequisite/s: ECON1101, ECON1203 Excluded: ACTL3005

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisons.

ECON3116**International Economics**

School of Economics

UOC6 HPW3

Prerequisite: ECON2101, ECON2102 or ECON2103, ECON2104.

Primarily a theoretical treatment of international trade and finance. Looks at international trade and finance theory; comparative costs, gains from trade, effects of resource endowments on trade; barriers to trade including tariffs and quotas; strategic trade policy; economic integration; imperfect competition; Australian balance of payments; balance of payments adjustment mechanisms, internal and external balance; foreign exchange markets; international monetary system; foreign investment.

ECON3119**Political Economy**

School of Economics

UOC6 HPW3

Prerequisite: ECON1102, PECO3000

Course examines alternative paradigms in economics and may include schools of thought such as the Post Keynesians, New Institutionalists, Marxians or Austrians. Particular non-traditional approaches to the theory

of the firm and such topics as experimental economics, Cambridge distribution and growth theory, economic sociology, economics of politics and the debate over economic rationalism may be covered. Specific topics will depend on student preferences.

ECON3120

Economic Reasoning

School of Economics

UOC6 HPW3

Prerequisite: ECON2102 or 48uoc of Arts and Social Science

How do economists reason? How do they know when their theories are useful? This course answers these questions. Within this context, it examines the development of economics and the structure of macro and micro theory. After completing this subject, students will be able to apply economics logically to practical problems.

ECON3121

Managerial Economics

School of Economics

UOC6 HPW3

Prerequisite: ECON2101 or ECON2105 or ECON2112

This course aims to equip students with the knowledge and skills necessary to tackle many of the complex strategic decisions facing modern managers. Topics to be covered include: the economics of mergers and acquisitions; strategic competition over prices, quality characteristics and capacity; profitability and entry into new industries; R&D and the strategic importance of innovation; collusion and other methods to reduce competition and the role of networks in modern economies.

ECON3202

Mathematical Economics

School of Economics

UOC6 HPW3

Prerequisite: ECON1202

This course gives students a working knowledge of static and dynamic optimisation techniques applied in economics. Topics include classical optimisation, comparative statics, non-linear programming, differential equations and optimal control. All techniques introduced are illustrated with mainstream applications such as consumer theory and the neoclassical theory of optimal growth.

ECON3203

Econometric Theory

School of Economics

UOC6 HPW3

Prerequisite: ECON2215

This course covers: a coherent theoretical development of multiple regression analysis; restricted least squares and tests of exact linear restrictions on parameters; theoretical aspects of problems with data; basic approaches to econometric specification in nested and non-nested models; error autocorrelation and heteroskedasticity.

ECON3204

Econometric Model Building

School of Economics

UOC6 HPW3

Prerequisite: ECON2207

This course aims to develop students' knowledge of the theory and practice of building causal econometric models for real-world application. Effective modelling requires a deep understanding of economic data, familiarity with a number of model design principles and an awareness of commonly-met construction problems and how to overcome them. These themes are discussed in sequence, in the context of two diverse applications. The presentation emphasises practicalities, rather than formal rigour.

ECON3206

Financial Econometrics

School of Economics

UOC6 HPW3

Prerequisite: ECON2206

This course is concerned with the special statistical characteristics that arise when modelling time series data, such as commodity prices, interest rate exchange rate data, that have been collected at high frequency (such as daily or hourly). Topics include: modelling time varying volatility (ARCH models), generalised method of moments estimators (GMM), and non-normality issues.

ECON3290

Introductory Econometrics (Arts)

School of Economics

UOC6 HPW3

Excluded: ECON2206

This course introduces econometrics and explores the representation of economic relationships by simple and multiple regression models; static and dynamic models; and the statistical complications of autocorrelation, collinearity, and heteroskedasticity. Practical computer applications feature throughout.

ECON3291

Econometric Methods (Arts)

School of Economics

UOC6 HPW3

Excluded: ECON2207

Covers estimation of econometric models using cross-section data, discrete choice models, and instrumental variable estimators. Practical computer applications feature throughout.

ECON4100

Advanced Economic Analysis

School of Economics

UOC6 HPW3

Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

Selected topics in advanced microeconomics and macroeconomics.

ECON4101

International Trade

School of Economics

UOC6 HPW3

Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

The theory and practice of international trade. The course will emphasize both traditional neo-classical trade theory as well as the more modern strategic trade theory. The principles and predictions of these theories will be used to consider the recent developments in Australian trading relations and international trading relations in general.

ECON4102

Strategic Market Behaviour and Government Regulation

School of Economics

UOC6 HPW3

Corequisite: ECON4100

Topics covered will be from amongst the following. Theory of the firm, production costs, monopoly, dominant and fringe firms, cartels, oligopoly and monopolistic competition, differentiated products, regulation, advertising, horizontal and vertical integration, strategic behaviour by firms, and R & D. Both theoretical and empirical results will be covered in the course.

ECON4103

Business Cycles and Growth

School of Economics

UOC6 HPW3

Corequisite: ECON4100

This course combines modern economic theory and quantitative techniques to examine theories of business cycles and economic growth. Measurement of business cycles, theories of real and nominal courses of business cycle fluctuations, endogenous growth theories, and cross-country growth analysis will be considered.

ECON4104

Economics of Labour Markets

School of Economics

UOC6 HPW3

Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

Traditional models of labour supply; participation and hours of work, immigration. Provision of training and skills, human capital theory. The theory of screening, specific and general skills models. Demand for labour, marginal productivity theory, labour hoarding, quit rates and turnover. Internal labour markets. The theory of wage differentials and the structure of earnings. Labour market segmentation. Trade unions and theories of bargaining.

ECON4105**Seminar in Research Methods**

School of Economics
UOC6 HPW3

This course provides training in the techniques and methods used in economic analysis and research. Students will be required to attend lectures and undertake a course of independent study as prescribed by the Head of School.

ECON4120**Economics Honours (Arts)**

School of Economics
UOC48 HPW6

Prerequisite: ECON2206, ECON2207 and credit in both ECON2101, ECON2102.

This program consists of four courses and a thesis ECON4127. The courses are ECON4100 and three other courses from a selected list.

ECON4127**Thesis (Economics)**

School of Economics
UOC12 HPW3

ECON4201**Applied Econometrics**

School of Economics
UOC6 HPW3

Prerequisite: ECON2207, ECON2101 or ECON2103.

This course takes a modern approach to applied econometric work. Various empirical problems are considered and the strengths and weaknesses of available ways of solving them are examined. Attention will be given to such matters as diagnostic tests in an LM framework, various forms of autocorrelation and heteroskedasticity, trending data, and outliers and influential observations. Practical experience is gained both from the study of the empirical literature and from class projects.

ECON4202**Advanced Econometric Theory**

School of Economics
UOC6 HPW3

Prerequisite: ECON3203

This course focuses on some theoretical aspects of economic time series and cross-sectional data analysis. Topics for the time series part include: stationary and non-stationary processes; unit root tests; VAR and cointegrated VAR models; cointegration tests; estimation and testing in the presence of unit roots. Topics for the cross-section data part include: fixed effect models; random effect models, unbalanced panels; dynamic models and estimation in the presence of autocorrelation; heteroscedasticity and unit roots.

ECON4207**Elements of Econometrics**

School of Economics
UOC6 HPW3

Prerequisite: ECON1203; Exclusion: ECON2206

The aim of this course is to provide students with an in-depth understanding of the simple and multivariate regression models. This course deals with numerous economic applications emphasising the practical aspects of model building. Extensions to the multiple regression model are considered in cases where the classical assumptions do not hold. In addition, topics including simultaneous equation models and qualitative choice models are covered using a range of applications from the fields of consumption, demand, investment and production economics.

ECON4227**Thesis (Econometrics)**

School of Economics
UOC24 HPW3

ECON4321**Economic History 4 Honours**

School of Economics
UOC48

Prerequisite: ECON1102 Excluded: ECON4321

Consists of a thesis and four courses: Approaches to Economic and Social History; Aspects of Australian Economic Development; Seminar in Research Method; and Comparative Issues in Economic History.

ECON4327**Thesis (Economic History)**

School of Economics
UOC24 HPW3

Honours students in their final year are required to prepare a thesis of not more than 20,000 words which must be submitted before the final examinations in November.

EDST1101**Educational Psychology 1**

School of Education
UOC6 HPW3

An introduction to the study of Educational Psychology which examines some aspects of development and of learning and instruction. Topics include: cognitive development, development of memory, the role of knowledge, problem solving and thinking, an introduction to instructional methods.

EDST1103**Educational Psychology 2**

School of Education
UOC6 HPW3

Prerequisite: EDST1101; Excluded: EDST2010, GENT1507

An extension of EDST1101. Focuses on learning and instruction in academic domains. Topics include cognitive processes involved in reading, in writing, in mathematics and science. Related research and implications for instruction are discussed.

EDST1104**Social Perspectives in Education**

School of Education
UOC6 HPW3

Investigates schools as an important part of society in terms of how they interact with and respond to cultural, political, economic and other factors in society. Introduces students to relationships between education and Australian society by focusing on the nature and purpose of education in Australian society, winners and losers in education and the current directions in education. Students investigate the above through a small collaborative research project.

EDST2030**History, Philosophy and Science Teaching**

School of Education
UOC6 HPW6

Prerequisite: EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1303

Examines the justification for, and ways of teaching, the historical and philosophical components of the NSW Years 7-12 Science curriculum; includes the study of the history and nature of science and its relations with other aspects of human culture such as philosophy, religion, art and poetry.

Note: Offered in condensed mode during 6 non-practice teaching weeks. Contact the School for dates and details.

EDST2032**Philosophical Issues in Education**

School of Education
UOC6 HPW3

Prerequisite: EDST1101 or EDST1104

Examines the ethical, political, epistemological and metaphysical aspects of a number of important issues in education such as: determining aims of education, determining what constitutes human well being, deciding on curriculum content, examining what constitutes knowledge claims in different discipline areas, distinguishing rote learning from understanding, identifying rational in contrast to other kinds of beliefs, appreciating the special role of educators in society and their sometimes conflicting obligations towards children, parents and the state, examining arguments about provision of equal educational opportunity, and social justice considerations in school funding.

EDST2041**Stress and Anxiety in Students and Teachers**

School of Education
UOC6 HPW3

Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1304, GENT1508

Examines the concepts of emotion, stress and anxiety and their effects in both students and teachers. Discusses a range of physiological and psychological aspects, and the impact of the individual's state on performance outcomes. Includes possible management procedures.

EDST2044

Motivation in Learning and Teaching

School of Education

UOC6 HPW3

Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1402, GENT1520

Explores various theories of motivation and their application to learning and teaching. A variety of theories, issues and strategies, such as goal setting, learned helplessness, self construal, self regulation, attributions of causality and group behaviour, concerned with achievement-related contexts, are discussed. Teachers' work motivation and implications for job satisfaction, professional commitment and teaching efficacy are considered.

EDST2045

Teacher Effectiveness, Research and Practice

School of Education

UOC6 HPW3

Prerequisite: EDST1101, EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1451, EDST3904

Explores concepts of teacher effectiveness, the measurement of teacher effectiveness and teacher development. Uses research to identify those teacher skills and behaviours that facilitate student achievement. Examines the school effectiveness and school improvement movements. Analyses the relationship between effective schools and teachers. Explores contemporary education issues within an effectiveness framework. Equips student teachers with the knowledge to link theory with best practice.

EDST2046

Language and Literacy in the Classroom

School of Education

UOC6 HPW3

Prerequisite: 36 units of credit or enrolment in Diploma of Education Program; Excluded: LING2700

Introduces students to theories of second language learning, similarities and differences between first and second language learning, language varieties and social attitudes, differences between community and classroom learning, and the implications for language teaching and learning. Uses current research to identify likely areas of difficulty in language learning and effective teaching strategies for language learners including English as Second Language learners.

EDST2052

Relationships Between Personality, Mood, Motivation and Learning

School of Education

UOC6 HPW3

Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1452, GENT1512

A study of the nature and measurement of a variety of personality characteristics, moods and attitudes commonly encountered in learning situations and their effect on learning. Relationships between personality and subject preferences and possible subsequent occupations.

EDST2053

Human Variation and Education

School of Education

UOC6 HPW3

Prerequisite: 36 units of credit or enrolment in Diploma of Education Program

Surveys variation in the major physical and psychological traits relevant to education, particularly ability, personality and sex differences, and examines how educators can best deal with them.

EDST2054

Managing the Classroom Environment

School of Education

UOC6 HPW3

Prerequisite: 36 units of credit or enrolment in Diploma in Education Program

Develops student understanding of the relationships between classroom environment, classroom behaviour and learning. Various models of

discipline and management and their application in the classroom will be examined. Demonstrates how teacher behaviour and/or instructional strategies can influence student behaviour and learning.

EDST2060

Educational Programs and Curricula for Intellectually Gifted Students

School of Education

UOC6 HPW3

Prerequisite: EDST1205 or EDST2050 or EDST4095 or enrolment in Diploma in Education Program; Excluded: EDST1206

Current research on appropriate curriculum design, teaching methodologies and program development for gifted and talented children. Evaluation of program models and enrichment strategies currently used in Australia and internationally. Development of differentiated curricula for use with academically gifted students in the regular classroom or in special settings. Examines research on the effectiveness of in-class enrichment, acceleration and various forms of ability, achievement and interest grouping with particular attention to the effects of these strategies on the students' academic and social development.

EDST2070

Culture, Identity and Education

School of Education

UOC6 HPW3

Prerequisite: EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1207, EDST3908

Examines how the processes of schooling have interacted with issues of identity and diversity. Explores the historical dynamics of migration and settlement and how their growth has affected the rhetoric of Australian nationalism. How have the issues of race and culture been addressed in our schools? Discussion of how multiculturalism has influenced educational perceptions at a policy level and examination of the interpretations of that policy in the context of the public school classroom.

EDST2090

Student Learning, Thinking and Problem Solving

School of Education

UOC6 HPW3

Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1301, GENT1502

Examines how we reason, think and solve problems. How should we communicate with people to help them understand and learn? Answers are sought in the context of theories of mental processes.

EDST3090

Introductory Teaching Experience

School of Education

UOC6 HPW6

From a combination of university lectures and school-based experiences, students will learn how to plan and conduct lessons in their teaching specialty, as well as become familiar with the many functions of schools and teachers. Seminars will be used to discuss the effectiveness of the lessons taught, and to enable students to identify and solve classroom-based problems. Students will spend one day per week in schools for ten weeks.

Note: A Method 1 course in a teaching specialisation is a corequisite.

EDST4000

Education Honours Full-Time

School of Education

UOC24 HPW5

Prerequisite: 42 units of credit in EDST with an average of 65% plus 12 units of credit in approved relevant courses offered by other Schools or programs

Includes three coursework components and a thesis of approximately 10,000 - 15,000 words. The thesis involves individual research work undertaken with direction from a supervisor. The thesis constitutes 60% of the final honours mark and the coursework components constitute 40% of the final honours mark.

Note: Intending Honours students are advised to consult the School about their program of study.

EDST4050

Education Honours Part-Time

School of Education

UOC12 HPW3

Prerequisite: 42 units of credit in EDST with an average of 65% plus 12 units of credit in approved relevant courses offered by other Schools or programs

Includes three coursework components and a thesis of approximately 10,000 - 15,000 words. The thesis involves individual research work undertaken with direction from a supervisor. The thesis constitutes 60% of the final honours mark and the coursework components constitute 40% of the final honours mark.

Note: Intending Honours students are advised to consult the School about their program of study.

EDST4081

Professional Issues in Teaching

School of Education

UOC6 HPW3

Prerequisite: EDST1101 and EDST1102; Excluded: EDST1449

Issues related to the teacher as a professional, and concomitant ethical ramifications including responsibilities to students, superordinates, subordinates, employers, parents and society; the role of the teacher in schooling; critical examination of Government and education system policies, especially those related to equity, education of girls, boys' education, English across the curriculum and child sexual assault. Issues related to private schools and private school systems. Models and means of classroom management.

Note: May not be counted towards a major sequence in the BA program. Course is compulsory for students enrolled in programs 4055, 4075 and 3408.

EDST4092

Computer Skills for Teachers

School of Education

UOC3 HPW2

Prerequisite: Enrolment in Program 5560 or completion of one Teaching Method course; Excluded: EDST1492

Designed to focus on practical computer skills that teachers will need on a day-to-day basis. This e-learning course centres on the use of the internet and its role in education, including learning how to locate an internet site, how to conduct education-based searches and download teaching and educational resources from the internet.

Note: Designed to meet the NSW DET requirements for new teachers in government schools. Students are required to follow a self access e-learning program. Students must attend the demonstration lectures from Week 1 to Week 5 of Session 1. Computer laboratory facilities are available in Mathews Building 210 and 211.

EDST4093

Special Education

School of Education

UOC3 HPW2

Prerequisite: 36 units of credit; Excluded: EDST4080

Exceptional children with learning, intellectual, physical, emotional or sensory disabilities. Philosophical and practical issues. Tests and criteria for identifying these students; their special needs, programs of remediation and evaluation of teaching strategies.

EDST4094

Teaching Experience

School of Education

UOC15

Excluded: EDST4090

Consists of 40 days experience in a New South Wales secondary school. Observation of lessons conducted by experienced teachers; planning and delivery of lessons, under the direction of supervising teachers. Organisational aspects of a high school and activities other than those related to subject delivery, eg school policies and general supervision of school students.

Note: Requires successful completion of 6 units of credit in Teaching Method courses.

EDST4095

Gifted and Talented Students: Recognition and Response

School of Education

UOC3 HPW2

Prerequisite: 36 units of credit; Excluded: EDST2050, GENT1501

Designed to equip prospective teachers with the skills to recognise and respond to the needs of intellectually gifted students, including those

from disadvantaged and minority groups. Critically examines theories and definitions of giftedness which currently influence education systems in Australia, and NSW in particular, and focuses on different forms and levels of giftedness. Introduces objective and subjective methods of assessing the abilities and achievements of gifted students. Examines the cognitive and affective development of these students in the light of current research on providing optimal contexts for learning. Introduces systematic approaches to differentiating curriculum for gifted and talented learners.

EDST4121

Chinese Method 1

School of Education

UOC3 HPW4

Excluded: EDST1428, EDST2428, EDST1469

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Chinese; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4122

Chinese Method 2

School of Education

UOC3 HPW4

Prerequisite: EDST1469 or EDST4121; Corequisite: EDST4094; Excluded: EDST1429, EDST2429, EDST1470

Continuation of the topics in EDST4121.

EDST4125

Drama Method 1

School of Education

UOC3 HPW3

Excluded: EDST1420, EDST2420, EDST1461

Conceptual structures and practical approaches in the teaching of drama in the secondary school, including consideration of school context, pupil experience and resources. Analysis of the Drama Syllabus; program development; assessment criteria and evaluation procedures. Workshop techniques for teaching theatre arts including consideration of appropriate levels of achievement.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required. Students are expected to have experience in at least one area of practical theatre arts: eg mime, movement or dance, mask, commedia, voice, puppetry, street theatre, technical, actor training, direction.

EDST4126

Drama Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1461 or EDST4125; Corequisite: EDST4094 or DANC2203; Excluded: EDST1421, EDST2421, EDST1462

Continuation of the topics in EDST4125.

EDST4127

English Method 1

School of Education

UOC3 HPW3

Excluded: EDST1422, EDST2422, EDST1403, EDST4129, EDST1463

Aims and objectives of English teaching and the principles which underpin selection and application of teaching methods. Various teaching strategies for effective classroom management in the teaching of English in secondary schools. Includes practical tasks such as analysing the English syllabus, planning units of instruction, selecting media of instruction, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4128

English Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1463 or EDST4127; Corequisite: EDST4094; Excluded: EDST1423, EDST2423, EDST1404, EDST4130, EDST1464

Continuation of the topics in EDST4127.

EDST4129

English Double Method 1

School of Education

UOC6 HPW6

Excluded: EDST1422, EDST2422, EDST1463, EDST4127, EDST1403

Aims and objectives of English teaching and the principles which underpin selection and application of teaching methods. Various teaching strategies for effective classroom management in the teaching of English in secondary schools. Includes practical tasks such as analysing the English syllabus, planning units of instruction, selecting media of instruction, and designing items of assessment. Extensive coverage of current English curriculum development initiatives and research based instructional strategies will be provided. Intensive application and evaluation of both the Junior and Senior syllabus will be facilitated.

Note: Available only to DipEd students.

EDST4130

English Double Method 2

School of Education

UOC6 HPW6

Prerequisite: EDST1403 or EDST4129; Excluded: EDST1423, EDST2423, EDST1464, EDST4128, EDST1404

Continuation of the topics covered in EDST4129.

Note: Available only to DipEd students. It is recommended that students complete this course in conjunction with EDST4094.

EDST4131

Literacy / English as a Second Language Method 1

School of Education

UOC3 HPW3

Excluded: EDST1424, EDST2424, EDST1465

Aspects of language and language theory; various teaching skills and strategies, different lesson types and the fundamentals of planning units of work. Principles for the evaluation of teaching materials and possible strategies for their use. Student assessment and classroom management in a range of teaching situations for learners of English as a second language.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4132

Literacy / English as a Second Language Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1465 or EDST4131; Corequisite: EDST4094; Excluded: EDST1425, EDST1466, EDST2425

Continuation of the topics listed in EDST4131.

EDST4133

French Method 1

School of Education

UOC3 HPW4

Excluded: EDST1430, EDST2430, EDST1471

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of French; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4134

French Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1471 or EDST4133; Corequisite: EDST4094; Excluded: EDST1431, EDST2431, EDST1472

Continuation of the topics in EDST4133.

EDST4135

Geography Method 1

School of Education

UOC3 HPW3

Excluded: EDST1493

Designed to equip students with the essential knowledge and skills to function as geography teachers in secondary schools by exposing them to a variety of teaching strategies which will enable them to operate effectively in classroom situations as well as in field settings. Lectures and discussions focus on the aims and objectives of geography teaching and the principles which underpin the selection and application of teaching methods. Also includes practical tasks such as analysing the geography syllabus, planning units of instruction, selecting media of instructions, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4 and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4136

Geography Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1493 or EDST4135; Corequisite: EDST4094; Excluded: EDST1494.

Continuation of the topics in EDST4135.

EDST4137

German Method 1

School of Education

UOC3 HPW4

Excluded: EDST1434, EDST2434, EDST1475

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of German; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4138

German Method 2

School of Education

UOC3 HPW4

Prerequisite: EDST1475 or EDST4137; Corequisite: EDST4094; Excluded: EDST1435, EDST2435, EDST1476

Continuation of the topics in EDST4137.

EDST4141

History Method 1

School of Education

UOC3 HPW3

Excluded: EDST1426, EDST2426, EDST1405, EDST4143, EDST1467

Aims and objectives of history teaching and the principles which underpin the selection and application of teaching methods for secondary school students. Teaching strategies for effective operation in classroom situations; practical tasks such as analysing the history syllabus, planning units of instruction, selecting media of instruction, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4142

History Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST1467 or EDST4141; Corequisite: EDST4094; Excluded: EDST1427, EDST2427, EDST1406, EDST4144, EDST1468

Continuation of the topics listed in EDST4141.

EDST4145

Indonesian Method 1

School of Education

UOC3 HPW4

Excluded: EDST1436, EDST2436, EDST1483

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Indonesian; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4146

Indonesian Method 2

School of Education

UOC3 HPW4

Prerequisite: EDST1483 or EDST4145; Corequisite: EDST4094; Excluded: EDST1437, EDST2437, EDST1484

Continuation of the topics in EDST4145.

EDST4147

Japanese Method 1

School of Education

UOC3 HPW4

Excluded: EDST1432, EDST2432, EDST1473

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Japanese; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4148

Japanese Method 2

School of Education

UOC3 HPW4

Prerequisite: EDST1473 or EDST4147; Corequisite: EDST4094; Excluded: EDST1433, EDST2433, EDST1474

Continuation of the topics in EDST4147.

EDST4149

Mathematics Method 1

School of Education

UOC6 HPW6

Excluded: EDST1444, EDST1479, EDST2444

Practical and theoretical issues in the teaching of mathematics in secondary classrooms; matching appropriate instructional strategies, including the use of technology and motivational strategies, to knowledge of how children learn mathematics. New South Wales syllabi; resource materials; relevant issues, including assessment, problem solving, gender and mathematics; practical experience in the preparation of lesson plans and a range of teaching techniques appropriate for mathematics.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4150

Mathematics Method 2

School of Education

UOC6 HPW6

Prerequisite: EDST1479 or EDST4149; Corequisite: EDST4094; Excluded: EDST1445, EDST2445, EDST1480

Continuation of the topics listed in EDST4149.

EDST4151

Science Method 1

School of Education

UOC6 HPW8

Excluded: EDST1446, EDST2446, EDST1481

Designed to prepare students for teaching the concepts and processes of science at the secondary level. Aims to assist students to develop skills in planning lessons, presenting demonstrations, using school science equipment, developing audio-visual aids and managing science classrooms. Demonstrates the use of a variety of teaching techniques. In addition, a range of resource material developed in recent projects in secondary science is introduced. Current syllabuses and ways by which they can be implemented are discussed. Important issues such as pupil

preconceptions in science, assessment and evaluation, pupil differences, safety, and legal considerations for the science teacher are considered.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4152

Science Method 2

School of Education

UOC6 HPW8

Prerequisite: EDST1481 or EDST4151; Corequisite: EDST4094; Excluded: EDST1447, EDST2447, EDST1482

Continuation of the topics listed in EDST4151.

EDST4153

Spanish Method 1

School of Education

UOC3 HPW4

Excluded: EDST1438, EDST2438, EDST1477

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Spanish; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4154

Spanish Method 2

School of Education

UOC3 HPW4

Prerequisite: EDST1477 or EDST4153; Corequisite: EDST4094; Excluded: EDST1439, EDST2439, EDST1478

Continuation of the topics in EDST4153.

EDST4157

Computing Studies Method 1

School of Education

UOC3 HPW3

Prerequisite: Enrolment in Program 5560

Designed to prepare students for teaching computing studies in schools. A number of syllabuses are studied in detail, including Design and Technology, Computing Studies for Years 7-10, Information Processes and Technology, Software Design and Development for Years 11-12. Aims to assist students to develop skills in the planning and management of computing lessons. Demonstrates a variety of teaching strategies associated with computing courses. Emphasises how students learn about computers and computing, and how computers impact on society. There is a focus on computing projects and how computing skills can be used to solve problems in other areas.

Note: A minimum of 24 units of credit in appropriate background studies is required.

EDST4158

Computing Studies Method 2

School of Education

UOC3 HPW3

Prerequisite: EDST4157; Corequisite: EDST4094

Continuation of topics covered in EDST4158.

EDST4161

Economics and Business Studies Method 1

School of Education

UOC3 HPW3

Enrolment in program 4055 Bachelor of Arts/Education or program 5560 Diploma in Education

Designed to equip students with the essential knowledge and skills to teach Economics and Business Studies at Years 11 and 12. Introduces students to a variety of teaching methods including project work and case studies. Examination of resources that are appropriate for the presentation of content in both HSC courses. Covers a range of assessment strategies.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background courses is required.

EDST4162**Economics and Business Studies Method 2**

School of Education

UOC3 HPW3

Prerequisite: EDST4161; Corequisite: EDST4094

Continuation of the topics studied in EDST4161.

EDST4163**Junior HSIE Method 1**

School of Education

UOC3 HPW3

Enrolment in program 4055 Bachelor of Arts/Education or program 5560 Diploma in Education

Designed to equip students with the essential knowledge and skills for teaching such HSIE subjects as Commerce and Geography from the Key Learning Area: Human Society and its Environment (HSIE) at Years 7-10 in secondary schools. Exposes students to a variety of teaching strategies which will enable them to operate effectively in both disciplines in classroom situations as well as field settings. Examines the content of both junior syllabuses and provides assessment and classroom management strategies in a range of teaching situations for learners in HSIE.

Note: A minimum of 24 units of credit in appropriate background studies is required.

EDST4164**Junior HSIE Method 2**

School of Education

UOC3 HPW3

Prerequisite: EDST4163; Corequisite: EDST4094

Continuation of the topics studied in EDST4163.

ELEC0806**Industrial Electrical Design**

School of Electrical Engineering and Telecommunications

UOC6 HPW3

This course deals with the fundamentals of Electrical Engineering relevant to Industrial Design. Without going into great detail or building on the ultimate physical properties of matter, the course will often use the concept of electrons. That, together with everyday knowledge of electrical applications, will be the starting point. On completion the student will have knowledge of some useful topics including the terminology of Electrical Engineering; which electric motor to choose depending on its application; Electrical Safety; Standards. The syllabus covers Ohm's law, concepts of AC and DC voltage and current, the basics of transformers, motors and electromechanical product systems, electromagnetic interference, shielding and earthing.

ELEC0807**Electrical Engineering 1E**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: PHYS1169 or PHYS1002 or PHYS1918.

Circuit theory: analysis and design of DC and AC circuits, comprising various energy sources and complex impedances, 3 phase circuits. Laboratory methods: electrical safety, transformers and motors, signal generators, measuring devices, oscilloscopes. Instrumentation: operational amplifiers, sensors, simple signal processing, AC machines and DC machines.

ELEC0809**Electrical Engineering 1C**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

Prerequisite: PHYS1169 or PHYS1002 or PHYS1918.

Circuit theory: analysis and design of DC and AC circuits, comprising various energy sources and complex impedances, 3-phase circuits. Laboratory methods: electrical safety, signal generators, measuring devices, oscilloscopes. Transformers and AC machines and induction motors. DC machines and motors.

ELEC1010**Introduction to Electrical Engineering**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

The lecture program for this course has three themes. The first lectures provide an introduction to the practice of electrical engineering. Key

skills and knowledge in safety, technical communication and information gathering are discussed. Also covered are issues of what engineers do, the wider context in which engineers operate and their obligations to society. Several lectures also explore the key theme of engineering systems. Many of the latter course lectures will be given by guest speakers from industry, and will introduce you to the world of electrical engineering. Your ability to learn from and summarise the visitors' lectures will be included in the material assessed in the examination. A number of lectures will also be given by different lecturers from the School of Electrical Engineering and Telecommunications covering key areas including power systems, control, telecommunications and electronics.

ELEC1011**Electrical Engineering 1**

School of Electrical Engineering and Telecommunications

UOC6 HPW6

Passive electrical components. Electric circuit concepts and relationship to field theory. Kirchhoff's laws. Node and mesh analysis of resistive networks. Network theorems. Controlled sources. Transient conditions. Sources of periodic signals. Average and r.m.s. values. Circuit models of diodes and transistors. Combinational logic principles and circuits.

ELEC1041**Digital Circuits**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC1011

Realisations of combinational circuits: MSI devices, ROM's, PLA's. Synchronous sequential logic circuits: latches, flip flops, counters, registers. Algorithmic state machines: systematic design procedures, ITDLS. Asynchronous sequential logic circuits, design applications. PLD's, & FPGA's.

ELEC2015**Electromagnetic Applications**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

Prerequisite: PHYS2939 or PHYS2949.

General field properties. Electric and magnetic fields. Inductance and capacitance. Dielectric and magnetic materials and their applications. Electrodynamical forces. Transformer and motor action: rotating magnetic fields. Dielectric and induction heating. Applications of Maxwell's equation. Transmission lines from circuit and electromagnetic viewpoints. Electromagnetic radiation. Some health and regulatory considerations.

ELEC2031**Circuits and Systems**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

Prerequisite: ELEC1011

Revision of basic circuit theory; RLC circuits; operational amplifiers; mutual inductance and transformers; state space modelling of systems with particular reference to circuits; Laplace transforms in general and applied to solution of state equations and circuit transient problems; two-port networks; assignments involving an introduction to PSpice and MATLAB.

ELEC2032**Electronics and Systems**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

Prerequisite: ELEC2031

Revision of basic circuit theory; RLC circuits; sinusoidal circuit response; mutual inductance and transformers; operational amplifiers; computer aided circuit design; state space circuit representations and time responses; homogenous and particular solutions for first and second order linear differential equations; computer aided analysis of signals and systems, including state space representations; continuous time signals, sinusoids and signal norms; convolution, impulse and step responses; phasors; AC circuits (transient and steady state responses); complex power; frequency responses of circuits and systems; three-phase circuits.

ELEC2041**Microprocessors and Interfacing**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: (COMP1011 and ELEC1041) or (COMP1011 and COMP2021)

An introduction to programmer model of computer organisation, including assembly and machine language. Process of translation of computer programs including high level language to assembly, assembly to machine instructions, compilers, assemblers, linkers and loaders. Number representation including computer arithmetic, signed, unsigned and floating point arithmetic. Data types and data structures, including characters, integers, structures, arrays. Instruction set including instruction type and cycles, data processing, load/store and branch instructions, addressing modes. Functions, including functions calling conventions, instruction set support for functions, stack frames. I/O interfacing, I/O interrupts, and programming interrupts, instructions support for I/O and interrupts, and OS support for interrupt and I/O interfacing. Memory hierarchy; including cache, main memory, virtual memory and memory management unit. Bus system including memory bus, I/O device buses, and arbitration.

ELEC2042

Real Time Instrumentation

School of Electrical Engineering and Telecommunications
UOC3 HPW3

Prerequisite: (ELEC1041 and COMP1021) or (SOLA1051 and ELEC1041)

Discrete time systems: representation of discrete time signals, digital filters, simple difference equations and discrete time responses, computer representation of digital systems using object oriented programming, data abstraction. Hardware requirements for real time applications: systems model of the computer, process-related interfaces (digital, analog, clocks), scaling, data transfer (polling, interrupts). Software development: real-time specification standards, state machines. Simple real time kernels: state machine multi-tasking, co-routines, interrupts, foreground/background systems. Systems theory and controller design: differential equations, transfer functions, state-space, PID control, numerical methods.

ELEC3004

Signal Processing and Transform Methods

School of Electrical Engineering and Telecommunications
UOC6 HPW5

Prerequisite: ELEC2032.

The mathematics of signals and linear systems. Fourier series, Fourier and Laplace transforms, discrete Fourier and Z transforms. Processing and analysis of continuous (analogue) and discrete-time (digital) signals. Analogue filters: approximation theory, Butterworth, Bessel, Chebyshev and elliptic filters. Filter impulse and frequency responses, stability, and sensitivity. Sampling continuous signals: the sampling theorem, reconstruction, and aliasing. The discrete Fourier transform (DFT) and the fast Fourier transform (FFT). Fundamentals of the design and realisation of finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Digital processing of analog signals, including applications of digital signal processing (DSP) and programmable DSP chips. The representation and modelling of non-deterministic (random) signals, correlation functions, and power density spectra.

ELEC3005

Electric Energy 1

School of Electrical Engineering and Telecommunications
UOC6 HPW5

Prerequisite: ELEC2015

Introduction to energy systems; three-phase circuits, overview of electricity generation, transmission, distribution storage and utilisation. Transformers: equivalent circuit, elimination of harmonics. Thermal rating of equipment. Electrical machines: fundamentals and applications of DC and AC machines. Small electrical machines. Introduction to power electronics: single- and three-phase switching of electrical power. Heat generation in and effects on electrical equipment. Insulation systems and deterioration, mathematical model of heat source and risk. Heat transfer by conduction, convection and radiation. Dynamic temperature behaviour and intermittent ratings of equipment.

ELEC3006

Electronics A

School of Electrical Engineering and Telecommunications
UOC6 HPW5

Prerequisite: ELEC2032.

Frequency analysis of amplifiers. Design and analysis of feedback amplifiers. Amplifier stability analysis. Operational amplifiers and

comparators. Schmidt triggers. Waveform generators: sinusoidal, square, triangular. A-D and D-A converters.

ELEC3014

Systems and Control 1

School of Electrical Engineering and Telecommunications
UOC6 HPW5

Prerequisite: ELEC2032.

History of feedback control; Differential equations; Laplace transforms; Transfer functions; Poles & Zeros; State space models; Modelling mechanical systems; First and second order systems; Block diagram algebra; Signal flow graphs; Mason's rule; Stability; Routh-Hurwitz criterion; Steady state errors; Root locus theory and sketching; Generalized root locus/Transient response design via gain adjustment/Pole sensitivity/Design via root locus; PID control; Lag-lead compensation; Bode plots/Nyquist plots/Nyquist stability criterion/Gain margin and phase margin/Time delay; M&N circles/Nichols chart/Introduction to design via frequency response; Practical classes include Matlab tutorials linked to lectures and construction and testing of DC servo motor feedback control systems.

ELEC3015

Electric Energy 2

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC3005

Basic aspects of both the supply and utilisation of electrical energy, with some emphasis on contemporary aspects of energy utilisation, including modern developments, energy efficiency and environmental aspects. Electrical energy supply systems: transmission and distribution systems, power transfer, reactive power effects, fault current calculation and protection. Quality of electricity supply; transient overvoltages, harmonics etc. and their ramifications in the operation of electrical power equipment. Electromagnetic compatibility (EMC). Utilisation of electrical energy: industrial application considerations, including DC machines, induction and synchronous motor drives. Computer-aided analysis of machines. Use of modern techniques of power electronics for application to variable speed drive systems, including DC-AC, DC-DC and AC-AC converters. Utilisation of electrical energy for lighting and industrial heating processes including discharge, induction and RF heating. Electrical safety of power equipment: equipment requirements for use in hazardous atmospheres; earthing and earth leakage protection.

ELEC3016

Electronics B

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC3006

Operating principles and fabrication technologies of electronic and photonic devices. Devices covered include: pn diodes, BJTs, MOSFETs, LEDs, solar cells, lasers and optical waveguides as used in communication systems and microwave devices. Ebers-Moll model of the BJT. BJTs & MOSFETs in analogue and integrated circuits, including TTL, ECL and CMOS. Principles and key technologies involved in microfabrication of integrated circuits. Non-idealities of devices resulting from realistic architectures and the effect of these non-idealities on the operation and design of circuits and systems.

ELEC3017

Electrical Engineering Design

School of Electrical Engineering and Telecommunications
UOC6 HPW5

Prerequisite/s: ELEC2032 and ELEC2041

Electrical product design in a manufacturing environment, from original idea through technical specifications, prototype, manufacture and finally to marketing. In particular: Design Project Management: Introduction to scheduling and other management techniques. Also introductions to costing, pricing, marketing, standards, patents, quality and reliability, safety, (electronic) manufacturing methods and systems, engineering innovation. Design Methodology: Systematic design procedures, design documentation. Designing for quality, for manufacture, for maintenance, for minimum life cycle cost. Use of computer aids for project management, drawing, PCB design, circuit analysis and synthesis, documentation. Engineering Drawing and Graphical Communications: Standards, projections, dimensioning, tolerancing, and drawing interpretation. Aspects of Electronic Design: Device specifications, component choices, sourcing, data sheets, tolerances, aging, thermal dissipation, passive

component characteristics. Also RFI and EMC, earthing, shielding, PCB layout principles, prototyping methods, interconnection technologies. Group Project: including specification, marketing and business plans, scheduling, design, prototype production, testing, formal technical report and seminar presentation.

ELEC3041

Real Time Engineering

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC2042

Real-Time Systems: real-time versus non real-time; hard/soft and critical/non-critical real-time systems; events and stimuli; processes, tasks and threads; concurrent processes; software architectures; state machines. Real-Time Kernels: Scheduling algorithms; co-routines and multi-tasking; inter-process communication and synchronisation; context switching; task management; reliability, testing and fault tolerance; timing analysis; device drivers. Real-Time Linux: POSIX and Linux; loadable kernel modules; inter-process communication; interrupts; shared memory and RT-FIFO's. Embedded Systems: Real-time kernels for embedded systems; Motorola 68HC11; MXC11 real-time executive.

ELEC4010

Project Management for Professional Services

School of Electrical Engineering and Telecommunications

UOC3 HPW4

Prerequisite: 96 units of credit

The purpose of this course is to provide students with fundamental insights and tools for project management in the provision of professional services. Lectures will cover the Projectised Organisation, planning processes, project execution and ongoing project management. Other topics include negotiation, organizational strategy development, human resources and effective communications.

ELEC4011

Ethics and Electrical Engineering Practice

School of Electrical Engineering and Telecommunications

UOC3 HPW2

Prerequisite: 120 units of credit.

An introduction to the nature ethical systems; the application of ethical bases to engineering practice with particular reference to electrical engineering and computing; codes of ethics in the professions, with special reference to the Code of Ethics of the Institution of Engineers, Australia; social, political, environmental and economic considerations.

Students are required to complete a minimum of 60 days of industrial training with one or more companies, preferably before the commencement of this course. The objectives of industrial training are (i) to develop an appreciation for the structure and operation of industrial organisations, (ii) to understand the role of the engineer and engineering in industry, (iii) to appreciate the importance of good communication and interpersonal skills, and to develop these skills, and (iv) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the School evidence from their employers of each period of training, confirming the work performed, together with a report. The report, typically 2000-3000 words long, should summarise the actual technical work performed, and should address the extent to which the aims of the industrial training have been met. It is preferred that some industrial training should be obtained in Australia. When the industrial training is done overseas, the report should include a more detailed description of the company concerned.

ELEC4042

Signal Processing 2

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC3004 Excluded: ELEC9342

Digital Oscillators. Decimation and interpolation. Frequency-Sampling Filters, Comb filters. Advanced design of digital filters and their implementation in Matlab. Discrete Fourier transform (DFT). Fast transform (FFT) algorithms. Wavelet Transform (WT). Comparison between FFT and WT. Multirate Systems. Quadrature-Mirror Filter Bank, Multilevel Filter Banks, Polyphase Decomposition. FIR Lattice filters, All-pole IIR Lattice filters and their implementation. Adaptive filters. Least square filter design. inverse filtering. Wiener filters, Noise reduction. Linear prediction and the Levinson algorithm. Analysis of Finite-word length effects. Limit Cycles. Round-off noise. Nonstationary Signal Processing.

ELEC4205

Electrical Energy Systems

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisites: ELEC3005 Excluded: ELEC9213

Review of the basic concepts used in power system analysis: phasors, complex power, three phase systems and per-unit methodology. Modelling of power system components, including transformers and synchronous machines. Aspects of power system operation, including power flow, reactive power control and fault analysis. Harmonics and their effects. Choice and use of protective equipment, including fuses, circuit breakers, relays and surge arresters. Equipment rating for operation in steady state and cyclic modes. Overvoltages and their effect in power systems. Insulation system design and practical limitations. Insulation coordination. High voltage equipment testing methods and their use in insulation condition monitoring of electrical energy systems. Quality of supply.

ELEC4216

Electrical Drive Systems

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC3005 Excluded: ELEC9231

Electrical Drive Systems. Elements of Drive systems and their requirements for servo and industrial drive applications. Drive representation, quadrant operation, dynamic and regenerative braking. Transfer function representations of dc motor and converter and drive performance analysis. Performance analysis of induction motor drives with variable voltage, voltage source, current source and variable frequency supply. Performance analysis of synchronous and reluctance motors with variable frequency supply. Transducers in electric drive systems. The analysis of asymmetrically connected induction motors. Unified machine theory. Computer aided design and analysis.

ELEC4240

Power Electronics

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC3006 Excluded: ELEC9240

Modern power semiconductor devices eg, diodes, thyristors, MOSFETs, and other insulated gate devices such as the IGBT, MCT and the FCT. Static and switching characteristics, gate drive and protection techniques. Various DC-DC, AC-DC, DC-AC and AC-AC converter circuit topologies, their characteristics and control techniques. Application considerations for remote and uninterruptible power supplies, and for computer systems, telecommunications, automobiles, traction and other industrial processes. Utility interaction, harmonic distortion, and power factor. EMI and EMC considerations.

ELEC4412

Control of Continuous-time Systems

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC3014

Design of controllers for multivariable dynamical systems (e.g., design of an automatic pilot for an aircraft). State space theory. Design of linear controllers using the polynomial approach and the Diophantine theorem. Continuous-time state space design methods for MIMO systems. Principal gains, shaping system performance, optimal control methods, Linear Quadratic Gaussian (LQG) controllers and Kalman filters.

ELEC4413

Control of Discrete-time Systems

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC3014

Covers the design of practical control systems intended for implementation using digital computers and embedded systems. Controllers may be developed using both continuous and discrete designs. The topics covered include: identification of model parameters; numerical integration and implementation of continuous designs; observers; discrete systems; stability analysis; observability and controllability; design of digital controllers; pole placement; nonlinear systems; Aspects of implementation are constantly emphasised.

ELEC4444

New Business Creation

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: 138 units of credit.

In the new economic environment, graduates must be better prepared to take control of their own employment futures which increasingly must include the option of entrepreneurship and the creation and growth of one's own company. For those graduates with a technical or engineering background, the new technology based firm offers extremely large potential to create jobs and wealth. The course provides the final year student with a clear understanding of the venture creation process with particular emphasis on technology-based ventures. A range of skills are developed relating to R&D management, intellectual property, technology contracts, product development, marketing, financial management and business planning. As a result, it is expected that this course could be the first step for a number of its attendees to progress to active involvement in new technology based firms either in Australia or internationally.

ELEC4483**Biomedical Instrumentation, Measurement and Design**

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC3004

Design and development of biomedical instrumentation for clinical measurement and biomedical research. Hardware and software design issues required to produce instruments which satisfy Australian and International standards for safety, performance and quality control. Tutorials and laboratories will be closely integrated so that design and analysis carried in tutorial sessions will be followed by testing and development in the laboratory sessions. A design project and/or case study will also be required as part of this course.

ELEC4503**Electronics C**

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC3006

Advanced analog circuit techniques for signal processing and interfacing. Active filters characteristics and design techniques. Realisation of active filters: continuous time RC and op amp circuits. Switched capacitor filters. Analog multipliers and their application in modulation, demodulation, gain control and phase comparison. The phase-locked loop: Phase detectors, VCO design, lock and capture processes. Applications. Low noise amplifier design. Power amplifiers; class A, class B, class C efficiency and linearity.

ELEC4522**Microelectronics Design and Technology**

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC3006

Review of technology for bipolar and MOS integrated circuits. Device models, layout rules. Analog circuit building blocks. Bipolar and CMOS operational amplifiers. CMOS logic. MOS Analog-Digital and Digital-Analog converters. Memory - DRAM/ SRAM. Yield, reliability, failure analysis techniques and packaging. The laboratory program is aimed at understanding the internal design of some standard IC functions.

ELEC4532**Integrated Digital Systems**

School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: ELEC1041 or COMP2021

Integrated circuit logic families with emphasis on MOS technologies, structured chip design, custom and semi-custom approaches, system architecture, computer aided design, layout considerations, timing estimates, circuit failures, faults, fault modelling, testing, design for testability.

ELEC4910**Thesis Part A**

School of Electrical Engineering and Telecommunications
UOC3 HPW4

Prerequisite: 132 units of credit and weighted average mark of 65 & ELEC3017.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4910. Thesis Part

A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Part B.

ELEC4911**Thesis Part B**

School of Electrical Engineering and Telecommunications
UOC9 HPW10

Prerequisite: ELEC4910.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4910. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which ELEC4911 is taken.

ELEC4914**Group Thesis Part A**

School of Electrical Engineering and Telecommunications
UOC3 HPW4

Prerequisite: ELEC3017 and 132 units of credit.

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4914. Group Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Group Thesis Part B.

ELEC4915**Group Thesis Part B**

School of Electrical Engineering and Telecommunications
UOC9 HPW10

Prerequisite: ELEC4914

The group thesis PartA&B is carried out in the last two sessions of the BE degree course. It is carried by a group of between two and five students working on various aspects of a particular topic. Under the guidance of a supervisor, directed laboratory and other research work on an approved topic is carried out. Generally, the project involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student group is required to present a seminar as part of the requirements for ELEC4914. Group Thesis Part B typically involves the detailed theoretical development or modelling. A written thesis report must be submitted on the project by Tuesday of Week 14 of the session in which ELEC4915 is taken.

ENGL1001**Ways of Writing: An Introduction to Literary Genres**

School of English
UOC6 HPW3

Excluded: ENGL1000, GENT0205

Introduces students to the study of literature. Reinforces skills in the close reading of literary texts, expands understanding of genres as ways of structuring texts, hones writing skills and strengthens abilities to construct and deploy critical argument. Genres to be examined will include poetry, novels, short stories and plays, but may also include essays, diaries, biographies and collections of letters.

ENGL1006**Imagining the City**

School of English
UOC6 HPW3

Introduces students to literary and cultural theory and encourages them to explore various processes in creative writing. Uses the city as a thematic centre, considering ways in which the city has been described and interpreted, imaginatively constructed, and theorised. Includes reference to intersecting cultural forms such as film and music.

ENGL1007**The Canon of English Literature**

School of English
UOC6 HPW3

A historical survey of English literature aimed at improving students' knowledge of how it has been organised into a set of special texts (a 'canon'). Enhances their powers to describe, interpret and enjoy it. Presents particular works of literature in English from the earliest periods through to the twentieth century in chronological order, attending to the features of language that make them literary, the context of their production, and some of their major themes. Introduces students to some different kinds of criticism (Marxist, feminist, post-colonial, Bloomian) by way of critical engagement with their accounts of how the canon has been formed and how it should be revised.

ENGL1009

Literature of Revolution

School of English

UOC6 HPW3

Examines the relationship between social upheaval and literary production focusing on key moments in the culture of modernity including the French Revolution, the American Civil War and the Industrial Revolution. Considers literature of protest and reform in civil rights movements that have profoundly reshaped conceptions of the individual, community and the state. Will include fiction, drama and poetry and consider the political charge of oratory and forms of disobedience played out in experimental writing. Comprises modules focused on literary analysis and a component of creative writing.

ENGL2101

Women on the Shakespearean Stage

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2156, ENGL2157

Studies the social and sexual roles of leading female characters in English drama from the late 1590s to the early 1630s, beginning with an analysis of female characters' experience of the 'love-death nexus' in four of Shakespeare's plays and concludes with a consideration of the 'lost' status and state ascribed to 'loose' women in plays by some of Shakespeare's major contemporaries.

ENGL2104

Poetry, Virtue, Corruption: Milton to Burns

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: IRSH2104

Studies how English, Irish, and Scottish poets from 1660-1800 define themselves in relation to a culture which they deem to be corrupt. Moves from Milton as the single just man in a society that has betrayed the godly revolution to the poet as libertine in Rochester and Behn, and the poet as political propagandist in Dryden. Sees how Finch, Swift, Pope, Wortley-Montague, and Johnson detach themselves and poetry from political life. Later poets show that once you do this, what is left are passion, death, superstition, madness, and small animals.

ENGL2206

Nineteenth Century Prose: Romantic & Victorian Fiction and Non-Fiction 1789-1914

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall

Focuses on the study of both Romantic and Victorian fiction and non-fiction in English. Novels and other prose texts will be interrogated in the context of contemporary social, political, religious and scientific thought.

ENGL2321

The Twentieth Century: Modernism and Modernity

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2203, ENGL2250, ENGL2350

Examines the main artistic movements which express what it is that makes the twentieth century distinctive in Anglophone societies. Involves investigations into such terms as modernism and postmodernism and their relationship with the experience of modernity as articulated in expressive practices ranging from 'High' to 'Low' culture, from art to the everyday. Although the emphasis is on literary work, the course will also refer to other media including painting, film/video, music.

ENGL2340

Contemporary Irish Literature

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL3471, IRSH2012

Critically examines the poetry and prose written by Irish writers after WWII in terms of issues of identity, nationality, gender, landscape, language, tradition, and religion. Considers how Irish poets have coped with the legacy of Yeats, Irish novelists with the legacy of Joyce and what their writing tells us about present-day Ireland and the contemporary world.

ENGL2422

Frontiers and Crossings

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2303

This comparative course in Australian, South African and American literature raises questions of the law and transgression in cultures defined as 'Frontier'. Examines the use of genres such as pastoral and the western, and explores the relations between concepts of gender and concepts of the frontier and transgression. The course is grounded in nineteenth- and early twentieth-century literature of the frontier, but also considers more recent reworkings of the field, particularly in film.

ENGL2460

Refiguring Dreams: Twentieth-Century American Literature

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2301

Explores American literature written between the 'twenties' and 'sixties', using novels and films which captured the spirit and the attention of each decade. Topics include: the 'roaring twenties', the Depression, the Second World War, McCarthyism, racial conflict and the liberation movements of the 'sixties'.

ENGL2520

Twentieth-century Australian Literature

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: AUST2014, ENGL2300

An examination of some major post-colonial issues in Australian writing of the twentieth century.

ENGL2621

Contemporary Australian Women Writers

School of English

UOC6 HPW3

Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: AUST2015, ENGL3401

Examines the particular concerns of a selection of contemporary Australian women novelists, poets and a short story writer. In the process asks whether women write from a different perspective, or have different concerns from their male counterparts in a culture that is generally considered to be male-dominated. Also considers the special question of women writing about the land.

ENGL2821

Visual Communication

School of English

UOC6 HPW3

Prerequisite: 6 level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL3504, ENGL3550, LING2530

Communication in contemporary society increasingly combines language with one or more different semiotic modalities, such as visual image, sound and spatial layout. Explores the techniques and theoretical frameworks useful in analysing how such multi-modal texts create meaning and construct positions for readers. Considers a range of texts from printed advertisements and magazines, to web pages, CD Roms, and public sites such as shops, museums and galleries. Aspects covered include the 'grammar' of visual images, the interaction of verbal and other modalities, ideological dimensions of multi-modal texts, questions of literacy and access.

ENGL2921**Creative Writing A**

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL3753

Aims to familiarise students with a wide range of contemporary writing and to encourage experimentation with a variety of different styles and genres in their own writing. Aims for a practical understanding of how literature works by developing critical reading skills. Students will also have the opportunity to gain feedback on their own writing in a supportive workshop environment. Aims to develop the craft skills necessary to generate, revise and edit their own work.

ENGL2930**Professional Writing**

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL3502, LING2560

Introduces the theory and practice of writing factual texts for professional contexts such as: journalism, educational publishing, the workplace, cultural institutions, non-profit organisations. Aspects covered include: forms and functions of different factual genres, appropriacy to readership of grammatical style, word choice, 'angle' and 'tone'; writing Plain English; writing for the web; self-editing skills. Includes workshops.

ENGL3122**Jane Austen in Context**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2103

Focuses on the juvenilia and novels of Jane Austen as social and cultural products of their time. Austen's early novels in particular were written under and against the influence of contemporary romantic, gothic and sentimental fiction. Explores the way her work engages with these and other eighteenth- and early nineteenth-century texts as various as gender-based codes of conduct and landscape-gardening, concluding with an examination of transformations, such as film and sequel.

ENGL3320**Modernism - Joyce**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2453, ENGL3472, IRSH3472

Intensive study of James Joyce's 'Ulysses' to enquire into selected aspects of modernism. Of particular interest will be the writer's negotiations with language and with structure, the function of history and/or myth, the role of the comic, and the tensions between innovation and various forms of tradition.

ENGL3420**The Rise of English**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2655

Investigates the social and political reasons for the emergence of English as a discipline. Examines issues such as the function of English in consolidating imperial goals, its links with English nationalism, the importance of its 'civilising' function in educational planning. Investigates post-colonial appropriations of English and examines the place of English studies in postmodern discourse.

ENGL3423**African Resistance Writing**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2305

Studies a range of resistance writing from various African countries. Examines the nature of literary resistance against political, cultural, colonial and patriarchal oppression and considers the ideologies and theories of literature which underlie the notion of writing as resistance.

ENGL3442**Narrative**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL3900

An analysis of narratives and narrative theory across a range of genres, this course examines selected novels, short stories, poems and plays, and introduces ways of interpreting them in the light of structuralist and post-structuralist narrative theory.

ENGL3651**Contemporary Critical and Cultural Theory**

School of English

UOC6 HPW3

Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL3902

Introduces students to some central texts and concepts in critical and cultural theory as these bear on the study of English. Begins with coverage of key moments and debates in structuralist and post-structuralist thought, including concepts of subjectivity, discourse, ideology and some introductory psychoanalytic and semiotic work, followed by a focus on questions of the body, pleasure and experience.

ENGL4000**English Literature Honours Research Full-Time**

School of English

UOC24 HPW5

Prerequisite: 54 units of credit in ENGL including 18 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a thesis. In the first session students are required to choose two courses. The courses offered in any one session depend on student demand and staff resources. The broad range of offerings is designed to enable students to conduct more intensive study in areas relating to special interests developed during earlier years of their English programs. Please refer to the list under the entry for MA, or see the School handbook. In the second session students submit a thesis of between 15,000 and 20,000 words based on research conducted on a topic to be chosen in consultation with the Head of School and other members of staff where appropriate. Throughout both sessions students are required to participate in regular thesis workshops.

ENGL4050**English Literature Honours Research Part-Time**

School of English

UOC12 HPW3

Prerequisite: 54 units of credit in ENGL including 18 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars in preparation of a thesis. In the first year students are required to choose two courses. The courses offered in any one session depend on student demand and staff resources. The broad range of offerings is designed to enable students to conduct more intensive study in areas relating to special interests developed during earlier years of their English programs. Please refer to the list under the entry for MA, or see the School handbook. In the year session students submit a thesis of between 15,000 and 20,000 words based on research conducted on a topic to be chosen in consultation with the Head of School and other members of staff where appropriate. Throughout both years students are required to participate in regular thesis workshops.

ENGL4500**Combined English Literature Honours Research Full-Time**

School of English

UOC12 HPW2

Prerequisite: 48 units of credit in ENGL including 12 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a combined thesis. In the first session students are required to take one coursework course in English and one course in the combined discipline. In the second session students submit a thesis on an agreed topic of between 15,000 and 20,000 words.

ENGL4550**Combined English Literature Honours Research Part-Time**

School of English

UOC6 HPW2

Prerequisite: 48 units of credit in ENGL including 12 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a combined thesis. In the first year students are required to take one coursework course in English and one course in the combined discipline. In the second year students submit a thesis on an agreed topic of between 15,000 and 20,000 words.

ENVS1011

Environmental Science 1

School of Biological, Earth and Environmental Sciences
UOC6 HPW6

An overview of some of the many problems encountered by Environmental Scientists: climatic change, disturbance events (such as logging, fire and mining), management and conservation of marine and terrestrial resources, water management and pollution are considered. These problems are placed in perspective with regional case studies to highlight specific issues using seminars, workshops, field excursions and group projects. Special emphasis is placed on the political aspects and values inherent in environmental issues.

Note: Restricted to the Environmental Science Programs.

ENVS2030

The Human Environment

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: ENVS1011; Excluded: ENVS2010, ENVS2020, GEOG2641.

The nature of human population growth and its impact on resource management and global-scale environmental problems. Controls and demographic processes in human populations. Different cultures and development levels. Consideration of urbanisation and the interaction between urban economic and environmental systems. Case studies of urban environmental management, coastal planning and industrial change are used to critically evaluate human-environmental interactions. Practical work involves introduction to Geographical Information Systems (GIS).

ENVS2801

Aspects of Environmental Policy and Law

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: ENVS1011

This course examines the legal issues likely to be encountered by an environmental scientist and addresses the question: Is the adversary system the most appropriate method of dealing with conflict in determining the appropriate use of resources? The difficulties encountered with the multiplicity of authorities and interactions between local government regulations, state and federal laws and international law are considered. Case studies examined at each of these levels are used to provide a brief overview of current environmental law in Australia and the World, with examples.

ENVS4101

Environmental Science 4 Biology A (Honours) F/T

School of Biological, Earth and Environmental Sciences
UOC6

ENVS4103

Environmental Science 4 Biology (Honours) F/T

School of Biological, Earth and Environmental Sciences
UOC18

ENVS4104

Environmental Science 4 Biology B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4204

Environmental Science 4 Marine B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4304

Environmental Science 4 Microbiol B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4404

Environmental Science 4 Chemistry B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4504

Environmental Science 4 Geography B (Honours)

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4518

Environmental Science 4 Geography (FBE) (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Full year research project and thesis, under supervision of a member of staff in the Geography Program in the Faculty of the Built Environment.

Note: Superior performance in 144 UOC of an appropriate Environmental Science program, including all core requirements is necessary for enrolment.

ENVS4546

Environmental Science Geography B (Honours)

School of Biological, Earth and Environmental Sciences
UOC12

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Coordinator must be completed. 12 UOC research to be completed in each session.

ENVS4602

Environmental Science 4 Geology B (Honours) Part-time

School of Biological, Earth and Environmental Sciences
UOC12

Part-time research project and thesis. 12 UOC of course work as approved by the Environmental Science Program Co-ordinator.

Note: Completion of 144 UOC (with credit average) of an appropriate Environmental Science program is required before enrolment is allowed.

ENVS4604

Environmental Science 4 Geology B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4704

Environmental Science 4 Math B (Honours) Full-Time

School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

EURO1000

The New Europe A

Faculty of Arts and Social Sciences

UOC6 HPW3

Despite a surprisingly rapid economic recovery after the catastrophe of World War II and the remarkable success of European integration, Western European nations were effectively relegated to the status of second-class powers, both politically and 'morally', and the East seemed caught in the vise of state socialism for the foreseeable future. But the unexpected collapse of the Berlin Wall and the disintegration of the Soviet 'block' force us to look again at the developments from 1945-1989 in a divided Europe and a divided Germany from a post-89 perspective: what was really going on?

Note: EURO1000/1001: Two session-length courses, which together form the first year of the European Studies major, but are also available separately. May also be counted towards a major in HIST.

EURO1001

The New Europe B

Faculty of Arts and Social Sciences

UOC6 HPW3

After the unexpected collapse of the Berlin Wall and the disintegration of the Soviet 'block', Europe seemed once again to have assumed a central role on the world stage. Yet the euphoria of 1990, which looked forward to a United Europe and the rapid transformation and integration of post-communist societies, has been followed by a considerable hangover. The events of the last years and their implications will be discussed, and the problems and prospects confronting the New Europe in relation to its past, present and future.

Note: EURO1000/1001: Two session-length courses, which together form the first year of the European Studies major, but are also available separately. May also be counted towards a major in HIST.

EURO2000

Concepts of Europe

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2400

Europe conquered, colonised and revolutionised the world despite being politically and culturally fragmented. Now, faced with the threat of decline, it seeks to overcome that fragmentation through the consolidation and expansion of the European Union, but different ideas about what a united Europe should be like continue to divide the participants in the European project. These differences have deep historical roots, as indeed does the European idea itself. They reflect the ambiguities of defining "Europe" between geographical boundaries, cultural identities, religious beliefs, political power, military security and economic interests, between local, regional, national and imperial loyalties. Traces the historical origins of the European idea, examines the various concepts of Europe used through the centuries, and discusses their relevance to the contemporary difficulties of the European Union.

EURO2201

Text Workshop A

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2491

A close analysis of short key texts in modern European history and culture, designed to develop students' close reading skills and to introduce them to important social, philosophical and theoretical questions through first hand encounters with the texts themselves.

EURO2311

The Attractions of Communism

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2489, SOCA3313

After the demise of the Soviet Empire, the 'totalitarianism thesis', which equates Fascism and Communism, has gained a new lease of life. Though there are many similarities in the political practices of these two

movements which dominated the twentieth century, their aims and the groups they appealed to seem radically opposed. Seeks to explain the attractions of Communism through the study of documents, literary texts and film, and to shed light on the reasons for the loyalty of many European workers and intellectuals to 'the cause' despite their increasing awareness of its deformations in the Soviet Union and elsewhere.

EURO2331

Understanding Nazi Germany: Origins, Structures, Explanations

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2422, HIST3101

Explores debates over the origins and role of Nazi Germany. Issues will include its roots in German history; the driving force of the regime; Hitler's role and Nazi Germany's war aims. Sixty years after its defeat in World War II, Nazi Germany continues to fascinate and to leave questions hotly debated by historians. Discusses whether the Nazis were modernisers or backward-looking romantics, and why there was so little opposition. Considers Nazi Germany's war aims and if the Holocaust was the inevitable outcome of Nazi ideology or a bureaucratic response to impending defeat. These issues will be explored in lectures and student-led seminar discussions of primary and secondary texts.

EURO2410

19th Century Europe, 1848-1918: Nation, Empire, Revolution

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2410 and IRSH2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de siècle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

EURO2411

Spain: From Loss of Empire to European Integration

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SPAN2406

An overview of Spain's turbulent history following loss of empire, including the Spanish Civil War and the Franco Dictatorship. Most attention is given to the nation's transformation since 1975 (the death of Franco and the return to democracy) and its enthusiastic embrace of Europe. As a peripheral European nation, and one that has been riven by cultural, political and economic conflicts in the recent past, Spain may well constitute a litmus test for the viability of European unity.

EURO2482

Europe, 1914-1945: Dark Continent?

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2066, HIST2067, HIST2482

Explores examples of catastrophic wars and revolutionary upheavals, examines cases of ethnic-cleansing and genocide, and analyses the impact of ideologies on concepts of nation, race and gender. Themes include: Total War, Socialism, Fascism, Communism, Anarchism and the "New Woman". Case studies will include Hitler's Germany, Stalin's Russia, the Spanish Civil War, WWI & WWII, the Armenian genocide and the Holocaust.

EURO2483

Decadence, Dada & All That Jazz: European Cultural History, 1880-1945

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2483

Focuses on the major cultural expressions of European modernity and the way in which they reflected social and political transformation. Themes include: modernism's challenges to positivism, fin-de-siècle decadence, Freud and the rise of psychoanalysis, the roaring 20s, feminism, Surrealism, Cubism, Cabaret, Americanisation, Jazz, and cultural representations of WWI & WWII.

EURO2600**European Integration**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ECOH2322

Aims to impart a knowledge and understanding of the institutions, current policies and likely directions of economic and social change within the European Union. Problems confronting nation states with differing institutional and policy directions (and in the case of Eastern Europe a different socioeconomic system) that now are in the course of being melded. Specific topics include the process towards a single market; the problems and implications of monetary integration; the trade distortions arising from the Common Agricultural Policy; the collapse of the Soviet system and the widening of the European Union; the operation of European multinationals; the process of privatisation in Europe; and European integration in relation to Australia and Asia.

EURO2700**What is Postcommunism? Central and Eastern Europe after 1989**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: LAWS2232

When European communist states collapsed like a house of cards, there was an explosion of euphoria in the region and around the world. Post-communism has turned out, however, to be a more complex, variable, and uncertain condition than was anticipated by many of those who greeted it with such enthusiasm. An introduction to some of the characteristic features of the post-communist world, to some of its difficulties, problems, challenges and triumphs; and to similarities and differences among the developments in post-communist societies. Discusses some of the major successes of post-communist countries and some of their major failures; students will be encouraged to reflect on similarities and differences between post-communist realities and those of the society/ies which they know.

EURO3000**Evidence and Interpretation: Controversies in European History**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit, including 6 units of credit in HIST at credit level or better; Excluded: HIST3905

From the famous controversy between E H Carr and Geoffrey Elton, sparked by Carr's 'What is History?' half a century ago, to the more recent 'postmodernism' debate, historians have been sharply divided over such key issues in historiography as the relative importance of empirical evidence, theories, moral values, and narrative subjectivity. Explores these issues through both the major writings of the key protagonists in these debates, and case studies of three of the most celebrated 'wars of interpretation' in European history: the English Civil War, the French Revolution, and the rise of Nazism in Germany.

EURO3001**Barbarians, Peasants & Vampires: Eastern Europe in History & Imagination**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST3109

Examines imaginative representations of East European peoples through history, drawing on evidence from visual images, travel writing, and chronicles. Clarifies the connections between history, mythology, demonisation and romanticism in West European depictions of "the East", and Eastern self-representation.

EURO3900**Advanced Program A**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit including 6 units of European Studies at credit level

Topics in modern European history and culture (consult co-ordinator).

EURO3901**Advanced Program B**

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit including 6 units of European Studies at credit level

Topics in modern European history and culture (consult co-ordinator).

EURO4000**European Studies Honours F/T**

Faculty of Arts and Social Sciences

UOC24 HPW5

Prerequisite: An average of 70% in the European Studies major and related courses

Primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for Combined Honours. A thesis on a cross-disciplinary topic and a program of coursework negotiated between the Program and the appropriate School(s).

EURO4050**European Studies Honours P/T**

Faculty of Arts and Social Sciences

UOC12 HPW3

Prerequisite: An average of 70% in the European Studies major and related courses

Primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for Combined Honours. A thesis on a cross-disciplinary topic and a program of coursework negotiated between the Program and the appropriate School(s).

EURO4500**Combined Honours (Research) in European Studies Full-Time**

Faculty of Arts and Social Sciences

UOC12 HPW2

Prerequisite: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Students must satisfy the single Honours prerequisite of the School concerned and have completed a major in EURO with an average of 70%. Prescribed honours coursework and a thesis on a cross-disciplinary topic approved by the Coordinator and the relevant Head of School.

EURO4550**Combined Honours (Research) in European Studies Part-Time**

Faculty of Arts and Social Sciences

UOC6 HPW2

Prerequisite: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Students must satisfy the single Honours prerequisite of the School concerned and have completed a major in EURO with an average of 70%. Prescribed honours coursework and a thesis on a cross-disciplinary topic approved by the Coordinator and the relevant Head of School.

EXCH8001**Arts and Social Sciences Exchange Program****EXCH8002****Built Environment Exchange Program****EXCH8003****College of Fine Arts Exchange Program****EXCH8004****Commerce and Economics Exchange Program****EXCH8005****Engineering Exchange Program****EXCH8006****Law Exchange Program****EXCH8007****Medicine Exchange Program****EXCH8008****Science Exchange Program**

Division of Registrar and Deputy Principal

UOC24

These courses are for administrative use by Schools and Faculty Offices only. Students will not be able to enrol in these courses via myUNSW.

UNSW actively encourages all students to take part of their degree program overseas through formal reciprocal exchange agreements with over 160 universities in 34 countries. Under the program, students can spend one or two semesters at a university in Asia, Europe, USA, India, Canada, or Latin America. Studies completed at the overseas university are credited towards the UNSW degree.

Local and international undergraduate and postgraduate students with a satisfactory academic record may apply to participate in the exchange

program after one semester of study at UNSW. During their period of exchange, students remain enrolled at UNSW and pay normal activity fees and student contributions, local or international fees. The overseas university waives tuition fees for exchange students, but students are responsible for their own travel, accommodation and living expenses.

Given the objectives of Exchange programs, and reciprocal agreements with partner institutions, students are required to enrol in a full-time 24 unit exchange program. Students are usually enrolled in a 24 unit of credit exchange course that relates to the faculty that administers their degree program, and will be charged the corresponding Student Contribution amount (for Commonwealth supported students) or UNSW tuition fees (for fee-paying students). Where combined degree program students are approved to take their exchange in areas related to both component degrees, enrolment will be in equivalent 12 unit of credit courses, on the same fee principles. Please refer to Fee Band above for more information.

For details on institutions participating in the International Exchange Program at UNSW, visit www.international.unsw.edu.au.

EXCH8021

Arts and Social Sciences Exchange Program

EXCH8022

Built Environment Exchange Program

EXCH8023

College of Fine Arts Exchange Program

EXCH8024

Commerce and Economics Exchange Program

EXCH8025

Engineering Exchange Program

EXCH8026

Law Exchange Program

EXCH8027

Medicine Exchange Program

EXCH8028

Science Exchange Program

Division of Registrar and Deputy Principal
UOC12

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For details on institutions participating in the International Exchange Program at UNSW, visit www.international.unsw.edu.au

FINS1612

Capital Markets and Institutions

School of Banking and Finance
UOC6 HPW3
Corequisite: ECON1101, ECON1202

Focuses on the major financial markets, including the equity, money, bond, exchange rate and derivatives markets. Students learn about the basics of financial instruments in these markets, such as bank bills, treasury bonds, futures and options and are exposed to the tools of analyses and the roles and innovations of major financial institutions. These include the banks and non-banks, such as finance companies, building societies and credit unions, life and insurance companies as well as investment management companies. Documents the emergence of the wealth management industry as an integral component of the Australian financial services sector.

FINS1613

Business Finance

School of Banking and Finance

UOC6 HPW3

Corequisite: FINS1612 or any two of ACCT1511, ECON1102, ECON1203

Looks at the essential aspects of financial decision-making. Financial mathematics is used to value securities and make capital expenditure decisions. Portfolio theory is introduced to provide a foundation for determining the relationship between expected risk and returns in financial and real asset investments. Dividend payouts and the choices between debt and equity financing are covered. Includes: factors affecting the formulation of the capital structure and the influence of the capital market environment. The implications of financial risk, taxation and the conflict of interest between managers and investors on the value of business firms are introduced.

FINS2100

Industrial Training 1 (Co-op)

School of Banking and Finance

UOC6

Prerequisite: FINS1613

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS2622

Emerging Capital Markets

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1612

Emerging capital markets have become in vogue as a result of a wave of mass financial liberalization, which occurred towards the end of the 1980s. Emerging financial markets behave differently to developed financial markets because of their level of integration (or conversely degree of segmentation) with world markets. A major aim of this course is to examine the issues pertinent to investment in emerging financial markets from both the perspective of international investors and policy makers. These broadly revolve around financial crises, liberalization and capital flows, pricing of political risks and other risks, governance and financial architecture, and regional integration.

FINS2624

Portfolio Management

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1613

Modern investment theories are introduced with an equal emphasis on theory and practice. The Markowitz model, capital asset pricing model, and single index model are studied and applied to design portfolios, price and manage risks, evaluate performance, identify mispriced assets, and estimate asset betas. The pricing of stocks, bonds, options, and futures; the impact of tax on the choice of bonds; the theories of the term structure; the duration concept; and the strategic use of options and futures for hedging and investment are also studied. Spreadsheet applications to securities pricing and investment theories are introduced to put theories into practice.

FINS2643

Wealth Management

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1613; Prerequisite or corequisite: FINS2624

FINS3100

Industrial Training 2 (Co-op)

School of Banking and Finance

UOC6

Prerequisite: FINS3616

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS3200

Industrial Training 3 (Co-op)

School of Banking and Finance

UOC6

Prerequisite: FINS3100

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS3616

International Business Finance

School of Banking and Finance

UOC6 HPW3

Prerequisite or corequisite: FINS2624

Focuses on the basic theoretical and practical knowledge required for the management of the financial and investment functions of multinational corporations. Topics include international diversification, foreign investment decisions, cost of capital, financial and political risks, hedging strategies, the financial benefits of Euro-currencies and Eurobonds and international equity markets. It is relevant to a broad range of professions including corporate treasury management, corporate finance, international securities trading and investment management. The general emphasis is on the identification and management of opportunities and risk relating to exchange rate fluctuations, international financial markets and government policy changes.

FINS3623

Venture Capital

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1613

Examines various aspects of entrepreneurial finance for small and medium enterprises in Australia and considers financial decisions made from start-up until the original shareholders cash out via public offering. Theories associated with entrepreneurship and specifically closely held enterprises are reviewed. In dealing with advanced issues in relation to project selection, business finance and financial management, there is a strong emphasis on encouraging students to understand how to augment traditional finance views with practical issues and problems faced by small to medium sized firms.

FINS3625

Applied Corporate Finance

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1613

Focuses on practical applications relating to the theory of financial decision making. Case studies, empirical evidence and current issues in the financial media are used to illustrate key decisions made by managers of the firm. Topics include advanced capital budgeting issues, capital raising including venture capital and initial public offerings, mergers and acquisitions and advanced capital structure and dividend policy issues. One of the aims is to develop students' ability to make judgments in a realistic setting and to develop the capacity to articulate judgments both orally and in writing.

FINS3626

International Corporate Governance

School of Banking and Finance

UOC6 HPW3

Prerequisite: ACCT1511, FINS1613

Corporate governance is fundamental to the existence and growth of public corporations as it encompasses the mechanisms which help suppliers of finance assure themselves of getting a return on their investment. Its practical importance is also evident in the recent mega corporate collapses around the world. This course analyses how different governance mechanisms prevent managerial self-dealing, protect minority shareholders and add value to corporations. Specific topics include: directors responsibilities, board structure; regulations; auditing; executive compensation; financial ownership and control; shareholder activism; hostile takeovers and defence mechanisms; and the difference in governance systems in the US, UK, Australia, Japan, Germany and some Asian countries.

FINS3630

Bank Financial Management

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1612, FINS1613

The theory and practice of banking from a financial management perspective; banks and the financial services industry; regulatory restrictions and financial management; asset management - liquidity and loan management; liability and deposit management; capital structure and dividend decisions; and financial management implications of electronic banking, and other developments are studied.

FINS3633

Real Estate Finance

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS2624

Evaluates real estate financing, the mechanics of the mortgage market, and the application of modern finance theory to the evaluation, selection and management of direct and securitised property investments. Topics include the role of regulation, taxation, government agencies, property trusts, and the banking system on real estate activity. Analyses real estate, diversification aspects, valuation techniques, evaluates lease structures, concepts of rent and yields.

FINS3634

Credit Analysis and Lending

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS1612, FINS1613

Focus is on latest approaches to loan portfolio selection and credit risk modelling. Topics include: credit scoring; credit ratings and default probabilities; pricing bonds and loans as options; reduced-form models; simulation-based approaches; capital structure and risk return analysis; overview of credit risk markets. Includes Excel-based project on portfolio credit risk..

FINS3635

Options, Futures and Risk Management

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS2624

An intermediate course on options, futures and techniques for managing asset risk. Topics covered include an overview of derivative securities, forward and futures contracts (on stock indices, investment and consumptive assets), options (on stocks, stock indices and futures), hedging positions in options and other derivative securities, binomial option pricing, risk-neutral valuation, the stochastic process followed by stocks, numerical techniques in option pricing, options on non-traded assets, exotic options and pricing biases.

FINS3636

Interest Rate Risk Management

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS2624

Looks at interest rate risk (IRR) and techniques for managing risk. Topics covered include term structure dynamics (including bond price lattices, spot and forward rate models), analytical and numerical techniques, duration measures, interest rate derivative securities (including options, futures, caps, floors and swaps), mortgage-backed securities and their derivatives, portfolio management, value-at-risk, and the interaction between IRR and credit risk. In discussing interest-rate derivatives, the primary emphasis is on the Hull-White model, but other models, such as the models of Ho-Lee, Cos-Ingersoll-Ross and Heath-Jarrow-Morton are discussed.

FINS3640

Investment Management Modeling

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS2624

Covers the essential analytical and quantitative tools applied in the investment management industry. It provides students with the knowledge and skills required to construct and manage portfolios of financial securities. Examines both index funds and actively managed portfolios, the mix of different types of assets in portfolios, and the role

of derivative securities in portfolio management. Focuses on portfolio theory, investment analysis, quantitative analysis, factor models and portfolio risk management. An essential component involves the use of software programs (MS-Excel and Barra) in applying concepts to the real-world market environment.

FINS3641**Security Analysis and Valuation**

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS2624

Explores techniques, models and industry practices used in the selection of securities for institutional equity portfolios. Both quantitative and fundamental analysis are covered. Considerable attention is paid to recent research, through published journal and working papers on the efficiency or otherwise of financial markets, and to anomalies that form the bases for quantitative stock selection models. Students will develop skills in finding recent material not yet in standard text books, thus enhancing their ability to remain current throughout their professional careers. A changing selection of contemporary topics, such as advanced theories of risk, hedge funds, etc. may also be included.

FINS3642**Strategies for Investment Management**

School of Banking and Finance

UOC6 HPW3

Prerequisite: FINS3640

Deals with the adoption of financial innovations in funds management with a particular emphasis on the understanding of the characteristics of a large trans-national hedge fund. Covers recent innovations in the development and management of some strategic special-purpose funds, designed for investors interested in particular financial markets eg foreign exchange markets and stock markets. Incorporates extensive use of computer spreadsheets, macros, and programs to aid in the examination of individual stock data and calculations and later hedge a fund via the derivatives market. Involves extensive use of MS-Excel and financial and statistical packages.

FINS3650**International Banking**

School of Banking and Finance

UOC6 HPW3

Corequisite: FINS3616

Focuses on providing students with an understanding of the operating environments of international banking institutions. Topics covered are: the nature and theory of international banking, the major functions of international banking (international trade financing, participation in the interbank foreign exchange and Eurocurrency markets, international investment banking services, and sovereign lending), and other important issues (international money laundering, international banking crisis, regulation of international banking, international debt crisis, and offshore banking markets). Some of the topics covered may vary over time.

FINS3651**International Financial Services**

School of Banking and Finance

UOC6 HPW3

Prerequisite or corequisite: FINS2624

Designed to acquaint the student with the planning and administration of a worldwide corporate insurance program under conditions of uncertainty. International dimensions of risk management are surveyed, highlighting the importance of differing economic, social, and political environments. Topics include: inter alia; the structure of insurance markets internationally; the economics of international trade in insurance; the integration and globalisation of financial services; the role, importance and functioning of reinsurance worldwide; the legal environment of risk management and insurance internationally; the tax environment for insurance internationally; rationales and nature of government intervention into insurance markets worldwide; regulatory harmonisation in insurance; the demographic and social environment for insurance internationally; the advantages and disadvantages of different social welfare strategies in an international business environment; and global risk management.

FINS3775**Research Methods in Finance 1**

School of Banking and Finance

UOC6 HPW3

Prerequisite: Credit or better in FINS2624; Excluded: FINS4775

Provides an introduction to econometric theory and its application in empirical finance. Much emphasis is on the practical aspects. There is extensive use of leading statistical and econometric software that is employed extensively in research and practice.

FINS4774**Financial Decision Making Under Uncertainty**

School of Banking and Finance

UOC6 HPW3

Prerequisite or Corequisite: FINS3775 or FINS4775

Provides an intermediate exposition of the fundamentals of portfolio selection and corporate finance: (i) the basics of choice theory; (ii) binomial option pricing; (iii) portfolio theory; (iv) classical, non-game theoretical theories of capital structure and dividend policy and empirical evidence on these theories; and (v) theories and evidence related to mergers and acquisitions.

FINS4775**Research Methods in Finance 1**

School of Banking and Finance

UOC6 HPW3

Prerequisite: Credit or better in FINS2624; Excluded: FINS3775

Provides an introduction to econometric theory and its application in empirical finance. Much emphasis is on the practical aspects. There is extensive use of leading statistical and econometric software that is employed extensively in research and practice.

FINS4776**Advanced Topics in Asset Pricing**

School of Banking and Finance

UOC6 HPW3

Prerequisite or corequisite: FINS3775 or FINS4775

Provides an in-depth treatment of asset pricing theories, including surveying the evidence from tests of these models. Both general asset pricing techniques and the micro-foundations of these models are covered. Emphasis is on applications of mathematical and statistical tools to provide a rigorous development of each topic. Students are assessed through a variety of means, which may include problem sets, exams, papers, and presentations.

FINS4777**Advanced Topics in Corporate Finance**

School of Banking and Finance

UOC6 HPW3

Prerequisite or corequisite: FINS3775 or FINS4775

The main emphasis is exposure to the latest research on selected topics in corporate finance. Topics covered are primarily selected on the basis of the lecturer's area of expertise and include methodological considerations in corporate finance research, corporate restructuring, agency theory and governance, performance measurement, valuation models, dividend policy and repurchases, forecasting, and capital structure. A combination of assessment methods is used, including group projects, case studies and student presentations. Assumes a sound knowledge of the theories relating to the foundations of finance.

FINS4779**Research Methods in Finance 2**

School of Banking and Finance

UOC6 HPW3

Prerequisite or corequisite: FINS3775 or FINS4775

A more advanced course in empirical methods in finance, covering general methodological aspects, testing of hypotheses and falsifiability principle. Review of relevant econometric material applications to topics such as generalised beta models of market equilibrium (including CAPM, APT), foreign exchange risk premium, stock price variability and volatility estimation.

FINS4781**Special Topics in Finance**

School of Banking and Finance

UOC6 HPW3

Prerequisite: Admission to BCom Honours

This is an optional unit forming part of the Fourth-Year Honours program and is designed in a flexible way to provide students with advanced knowledge in important areas of finance that fit in with the supervisory capacity of the academic staff. The content areas may thus vary from year to year. A more detailed course outline will be provided prior to the commencement of the unit.

FINS4794**Thesis B (Finance)**

School of Banking and Finance
UOC18

Note: The thesis is to be approved and supervised by the School of Banking and Finance.

FINS4795**Thesis (Finance)**

School of Banking and Finance
UOC24

Note/s: The thesis is to be approved and supervised by the School of Banking and Finance.

FOOD1120**Introduction to Food Science**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course will provide students with an insight into the breadth and depth of food science, outlining many of the historical, social, physiological, nutritional, industrial, legal and psychological issues affecting food consumption and production. This course will also introduce some of the common scientific principles underpinning many of the practices and challenges relating to food preparation in the home, the food service industry and food manufacturing sectors, highlighting the role of creativity and innovation in meal design and food product development.

FOOD1130**The Food Industry: Professional Perspective and Practice**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course will examine the contribution of the breadth of food science and technology to the food industry, and the skills expected of a food science professional. A technical lecture series will demonstrate the integration of all aspects of food science and technology, and their underpinning by the basic sciences, through examination of a hypothetical company producing a selected food product. Field trips will provide early exposure to the food industry. Students will be exposed to the theory of and have the opportunity to practice a range of generic skills relevant to both their University studies and practice in food science and technology, including oral and written communication, team/group work, information literacy, personality types and learning styles.

FOOD1230**Food Choice: Psychology, Preference and Acceptability**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course considers factors that influence the choice of foods and eating patterns by consumers, and provides a rational basis for the design, development and marketing of new food products and new processing technologies. It is aimed at students with interest in food and human behaviour, for example, marketing, advertising, food service/hospitality and psychology, as well as students in food science and technology. Topics covered include: physiology of taste and smell; sensory acceptability of foods in terms of flavour, appearance and texture and its measurement (sensory evaluation); psychological, physiological, cultural, religious, environmental and genetic factors that affect food preference and consumption patterns and behaviour; eating disorders (eg. anorexia, bulimia); diet and consequences for physical and mental activity (eg. sports diets); implications for food product development, process development, marketing, advertising and diet design.

FOOD1360**Food Processing Principles**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Food processing is introduced in a series of integrated labs and lectures covering the basics of food engineering: heat transfer and fluid flow. This includes heat and mass balances, heat and mass transfer, Fourier's equation, modes of heat transfer, heat exchangers, transient heat transfer and Heisler charts for cans, food properties, physical chemistry of phases in crystalline, steam and enthalpy, thermal death, sterility, F_0 , Z and D values, retorting, lethality, texture of solids and liquids, product flow and pumping, non-Newtonian behaviour, esp. viscoelasticity, and intermediate moisture foods. Some example food operations are presented, including mixing powders and slurries, baking, frying, roasting, cooling, thawing, and freezing.

FOOD1370**Food Preservation: Principles and Applications**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

The basis of food science is presented in a series of lectures and integrated labs covering traditional and novel methods of preserving foods for distribution and storage. Food commodities are introduced in groups, including dairy, meat, fish, fruit, vegetables, beverages, eggs, sugars, cereals and lipids. The need for preservation is discussed, including physical, chemical and biological deterioration factors and water relationships. Technologies covered are heating, chilling, freezing, drying, brining, pickling, sugar, radiation, packaging (MAP and CAP), chemical preservatives and novel methods.

FOOD1380**Unit Operations in Food Processing**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: FOOD1360, FOOD1370

The principles introduced in FOOD1360 and FOOD1370 are used in studying some of the more important unit operations in the food industry. The procedure used for each unit operation is to firstly describe the process, its applications, effects on the food product and requirements, appropriate process diagrams, mass and heat balances and flows, solving unit operation problems. Unit operations covered are refrigeration, dehydration, evaporation, extrusion, physical separation and comminution.

FOOD1390**Product Design and Development**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: CHEM2921.

This course provides a series of lecture and laboratory classes that cover the basic theoretical and practical concepts associated with the design and development of new food products and processes. The product development process: the need for new products, types of new products, the development team, idea generation, steps in the product development process; the role and specific tasks of market research, market research techniques, target markets, limitations of market research. Roles of advertising and supermarkets in new product success; product lifecycles, reasons for new product failure and preventative strategies. Ingredient and additive behaviour and contributions in foods: properties of the major food components in relation to food properties, storage stability and nutritional properties of foods. Impact of new technology. Sensory analysis: basic sensory analysis techniques, expert vs consumer panels, interpretation and implementation of sensory testing data, sensory rankings from different target markets.

FOOD1400**Project**

School of Chemical Engineering and Industrial Chemistry
UOC6

Prerequisite: CHEM3811, FOOD1360, FOOD1370, FOOD1380, FOOD1390, FOOD2320, FOOD2330, FOOD2340

The student undertakes an individual project involving a literature survey, an experimental investigation, the preparation of a detailed report on a selected topic in food science and technology, and presentation of seminars on a literature review and experimental results.

Note: Restricted to program 3060.

FOOD1480**Minor Project**

School of Chemical Engineering and Industrial Chemistry
UOC6

Prerequisite: CHEM3811, FOOD1360, FOOD1370, FOOD1380, FOOD1390, FOOD2320, FOOD2330, FOOD2340

The student will be required to undertake a literature-based study of a research problem, submit a project thesis and present seminars arising from the project.

FOOD1490**Advanced Food Chemistry**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: CHEM3811 or equivalent

Chemistry and analysis of food flavours; measurement, fractionation and structural determination of proteins, starch and its derivatives, non-starch polysaccharides, dietary fibre constituents and lipids; detection and measurement of mycotoxins; analysis of selected vitamins; application of advanced separation techniques to food components.

FOOD2320

Food Microbiology

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This is a lecture-laboratory course that introduces the basic concepts of food microbiology, covering the ecology, biochemistry, isolation, enumeration and identification of bacteria, yeasts, fungi and viruses associated with foods and beverages. Food spoilage: specific food microorganism associations; taxonomy and biochemistry of major spoilage species; chemical and physical changes to food properties; spoilage of specific commodities. Foodborne microbial disease: foods as vectors of disease and food poisoning; statistics and epidemiology; ecology and taxonomy of foodborne pathogenic microorganisms; control and prevention by hygiene, microbiological standards and legislation. Food fermentation: microbial ecology and biochemistry of fermentations; fermentations of alcoholic beverages, bakery products, dairy products, meats, vegetables, cocoa beans, soy sauce; production of food ingredients and processing aids by fermentation. Microbiological examination of foods: sample preparation and sampling plans; sublethal injury; standard methods for determination of total plate counts, indicator organisms, foodborne pathogenic species, principal spoilage species. Microbiological quality assurance: specifications and standards; decision criteria; hazard analysis and critical control point (HACCP) concept; cleaning and sanitation.

FOOD2330

Quality Assurance and Control

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course aims to provide students with a knowledge base of concepts in quality assurance (QA) and quality control (QC) in the context of the food industry. What are quality, QA, QC?; organisation-wide quality management, quality costs, Total Quality Management and ISO9000-based Quality Management Systems; tools in quality management, brainstorming and other qualitative tools, benchmarking; production-level QA and QC, HACCP, risk analysis and management, statistical quality/process control, sampling and sampling plans, cleaning and sanitation; QA in the laboratory, accreditation, metrology, proficiency testing; regulatory aspects of QA/QC; auditing quality; staff training.

FOOD2340

Food Safety

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course presents a package of information and exercises designed to demonstrate the public health risk associated with the production and consumption of foods and the strategies adopted by industry, government and consumers to manage and control these risks. Topics covered include: chemical risks - natural, additives and residues; microbiological risks - bacterial, fungal, viral, algal, parasites, prions; nutrition - diet and health; genetically modified foods - concepts and specific safety issues; management of food safety by industry - TQM, HACCP, ISO; management of food safety by government - food law, national and international regulation and issues; legal and insurance issues; consumer concerns - education, social, moral and ethical issues.

FOOD2350

Forensic Food Science

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW3

This course consists of a series of lectures, discussions and assignments that examine a wide range of techno-legal issues which frequently confront companies involved in the manufacture and service of foods and beverages. A portfolio of case studies are used to demonstrate the fundamental and practical aspects of the investigative process: defining the cause of the problem, acquisition of appropriate information and analytical evidence; loss assessment; reporting; communication with solicitors, barristers and insurance companies; appearance at court. Topics covered include: the legal process; prosecution for breach of food safety, quality and labelling regulations; prosecution of fraud, deception and adulteration; compensation disputes between companies when products and processes do not meet contractual specifications;

compensation claims from consumers who have experienced foodborne illness; food composition and labelling authenticity, including religious certification for halal and kosher foods, genetic modification using recombinant DNA technology, species homogeneity; sabotage, deliberate adulteration, tampering; protection of intellectual property, patents. The course is aimed at students in food science and technology, but its content and structure are designed to accommodate students with a broader background in science and technology, as well as practicing professionals in the food/ beverage industries, government regulatory agencies and consulting companies.

FOOD2480

Advanced Food Microbiology

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW3

Prerequisite: FOOD2320

This course consists of a series of lectures, discussion groups and visits to local food companies that takes food microbiology from its basic concepts to advanced consideration of current issues on food spoilage, foodborne microbial disease, food and beverage fermentations and the use of microorganisms as processing aids and sources of food ingredients and additives. With a focus on commodity groups it considers industry structure, food properties and processing operations that impact on the growth, survival and biochemical activity of microorganisms as they relate to spoilage, safety and desirable fermentations. Commodities considered include dairy products, fruit and vegetables, meat products (red meats, poultry, seafoods) and alcoholic beverages. Advanced concepts of microbial taxonomy, biochemistry, physiology, detection and enumeration are covered as well as the use of microorganisms as sources of colours, flavours, polysaccharides, vitamins, amino acids and as probiotic and biocontrol agents.

FOOD3220

Nutrition

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Corequisite: BIOC2101 or BIOC2181

This course consists of a series of lectures and practical exercises that provide students with knowledge about the occurrence of nutrients in foods and their role in human physiology, health and disease. Structure, properties and sources of nutrients; role of nutrients in human structure and function. Introduction to food groups, tables of food composition, food labels, dietary recommendations; food guides; nutrition in health and disease; nutritional needs of vulnerable groups: infants, pregnant and lactating women, the aged; dietary intolerance, disorders related to the affluent diet including coronary heart disease, dental caries, diabetes, hypertension and cancer; problems of undernutrition including protein, energy, mineral and vitamin deficiencies; physiological and nutritional aspects of dietary fibre, alcohol; assessment of nutritional status using dietary and anthropometric techniques; practical exercises on anthropometric techniques and measurement of nutrient intake using computer systems on an individual and group basis.

FOOD3330

Nutrition for Sports Science

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: BIOC2101 or BIOC2181; Excluded: FOOD3220, FOOD3567.

This course consists of a series of lectures and practical exercises that provide students with the knowledge about the occurrence of nutrients in foods and their role in human physiology and health. Structure, properties and sources of nutrients, role in human structure and function. Introduction to food groups, tables of food composition, food labels, dietary recommendations, National physical activity guidelines. Nutrition through life cycle. Dietary intakes of athletes, disorders related to obesity, alcoholism, iron deficiency and calcium imbalance. Effects of exercise on protein and carbohydrate metabolism, fluid imbalance. Dietary supplements and nutritional aids in sports, special needs of athletes.

FOOD3440

Advanced Nutrition

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: FOOD3220

This course consists of lecture and discussion classes that build on the basic concepts of nutrition with respect to the food supply, giving advanced treatment of the following topics. Food and nutrition policy:

structure of the population; food supplies, food consumption, nutritional epidemiology; population dietary references; food programs such as food fortification, supplementary feeding schemes, nutritional rehabilitation, nutritionally modified foods, nutritional regulations and standards, nutrition education, dietary and nutrition interventions (ORT, family planning, infection control, growth monitoring); principles, practice and evaluation of applied nutrition programs; advanced assessment methods in nutrition: nutrient bioavailability studies, nitrogen balance tests, vitamin load tests, sodium and potassium excretion, creatinine excretion, fitness assessment, biochemical assessment, design and evaluation of nutritional epidemiology studies, food intake studies.

FOOD4450

Advanced Food Processing

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course consists of lectures and discussion groups covering advanced aspects of modern food processing and preservation. This includes food bulk and thermal properties, rheological properties and models of heat transfer (analytical, graphical and numerical methods, computer packages, microwave, infrared, and radio frequency irradiation), process modelling and control, dehydration, evaporation and distillation.

FOOD5400

Industry Liaison

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: 144 Units Of Credit.

This course involves structured inspections of a variety of food processing establishments, production areas and food research institutes and stations within Sydney, NSW and interstate. The aim is to strengthen student understanding of the structure, practical operation and management of the local food industry and to demonstrate how theoretical concepts in food science and technology are applied in a commercial situation. The important linkage between the technical aspects of food production and commercial requirements of food companies will be explained.

FOOD5410

Industry Practicum

School of Chemical Engineering and Industrial Chemistry
UOC24 HPW24
Prerequisite: 144 Units Of Credit.

This course involves a structured program of activity within a food processing or related company as approved by the course coordinator. The aim is to provide a detailed insight into aspects of company structure and activity through project work, reports and seminars.

FOOD9410

Honours Research Project

School of Chemical Engineering and Industrial Chemistry
UOC21

An extensive research project is required on some aspects of food science and technology, including preparation of a literature review, conduct of laboratory-based research, presentation of two seminars, and submission of a thesis based on the results of the research project. Candidates will undertake corequisite formal coursework as approved by the Program Coordinator.

Note: Restricted to program 3065.

FOOD9420

Food Science and Technology (Honours)

School of Chemical Engineering and Industrial Chemistry
UOC24

Advanced training in selected areas of food science and technology: a formal component consisting of lectures, seminars, tutorials and written assignments plus a supervised research program in a specified area of food science and technology. Students intending to do this program should consult with the Program Coordinator about selection of courses in earlier years.

FOOD9430

Food Science (Honours)

School of Chemical Engineering and Industrial Chemistry
UOC24

A research project in a selected area of food science, including preparation of a literature review, conduct of laboratory-based research, presentation of a seminar and submission of a thesis based on results of the research

project. Candidates will undertake 24 Units of Credit corequisite formal coursework as approved by the Program Coordinator.

Note: Restricted to programs 3970, and Advanced Science - Life Sciences. Enrolment requires co-requisites: 24 UOC of level III/IV courses as approved by the Program Coordinator.

FREN1101

French Language and Culture 1A

Department of French
UOC6 HPW6
Excluded: FREN1001, GENT0425

Introduction to listening, speaking, reading and writing in French; development of basic competence in everyday practical situations, together with regular study of grammar and initiation to contemporary French culture.

Note: For students with no previous knowledge of French.

FREN1102

French Language and Culture 1B

Department of French
UOC6 HPW6
Prerequisite: FREN1101 or FREN1001; Excluded: FREN1002

Further development of the skills learnt in FREN1101 now in a wider range of practical situations, together with the continuation of the study of grammar and contemporary French culture.

FREN2101

French Language and Culture 2A

Department of French
UOC6 HPW5
Prerequisite: FREN1102 or FREN1002; Excluded: FREN2003

Intensive study of French language, with particular emphasis on aural comprehension, oral expression and the acquisition of elementary writing skills. Initiation into the study of syntax and the various registers of French. Further study of French culture.

FREN2102

French Language and Culture 2B

Department of French
UOC6 HPW5
Prerequisite: FREN2101 or FREN2003; Excluded: FREN2004

Extension of the skills gained in FREN2101 with special emphasis on the study of syntax and an introduction to literary text analysis. There is also further study of French culture.

FREN3101

French Language and Culture 3A

Department of French
UOC6 HPW4
Consolidation of interactive skills and initiation to the study of some forms of spoken and written discourse of general interest, mainly oral discussion and short written narrative texts. Systematic study of French syntax and phonology.

FREN3102

French Language and Culture 3B

Department of French
UOC6 HPW4
Prerequisite: FREN3101 or FREN1011 or FREN3003; Excluded: FREN1012, FREN3004

Extension of the skills gained in FREN3101 with a focus on spoken and written discourse of general academic interest, such as oral presentation and short essay. Further study of French syntax together with systematic literary text analysis.

FREN3103

French Language and Culture 4A

Department of French
UOC6 HPW3
Prerequisite: FREN3102 or FREN1012 or FREN3004; Excluded: FREN1021, FREN2013

Consolidation of all skills and initiation to the study of some forms of spoken and written discourse of vocational interest, mainly interview, oral report and short essay. Systematic study of syntax and contemporary French culture.

FREN3104**French Language and Culture 4B**

Department of French
UOC6 HPW3

Prerequisite: FREN3103 or FREN1021 or FREN2103; Excluded: FREN1022, FREN2014

Extension of the skills gained in FREN3103 with focus on some forms of spoken and written discourse of vocational and academic interest such as debate and essay. Further study of syntax and systematic literary text analysis.

FREN3105**French Today**

Department of French
UOC6 HPW3

Prerequisite: FREN3004 or FREN3104 or FREN1022 or FREN2014; Excluded: FREN3110, FREN3120

Theoretical and practical study of the patterns of contemporary French. Special focus on the features of spontaneous speech in interaction. Students will practise interactive skills and expository discourse in French. This course is particularly useful for students intending to teach French as a foreign language.

FREN3106**Discourse Studies: Media, Politics and Society**

Department of French
UOC6 HPW3

Prerequisite: FREN3004 or FREN3104 or FREN1022 or FREN2014; Excluded: FREN2030

Theoretical and practical study of French in various vocational fields. Topics may include media, political and scientific types of discourse. Students will practise their written skills and gain a better understanding of sophisticated uses of French in contemporary Francophone societies.

FREN3210**French Prose Fiction**

Department of French
UOC6 HPW3

Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011, FREN3101 or FREN3104

A close study of three French novels from the realist tradition of the nineteenth century. While studying each work in its historical and social context, the course will also observe the evolution of major themes and/or structural aspects.

FREN3211**Special Reading Program**

Department of French
UOC6 HPW3

Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011 or FREN3104

Reading in selected French masterpieces. Students are required to submit an in-depth analysis of work studied.

FREN3214**Modern French Poetry**

Department of French
UOC6 HPW3

Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011 or FREN3104; Excluded: FREN3201

A close study of the works of two major poets of the 19th century, Baudelaire and Rimbaud. Analyses the historical context and the beginnings of modernism in the work of these two poets.

FREN3312**French Cinema and Society**

Department of French
UOC6 HPW3

Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011 or FREN3104; Excluded: FREN3510

A study of contemporary French cinema. The aims of the course are to develop the student's skills in analysing film, and to examine the ways in which French society is represented in fiction films. It will also introduce students to French film theory. Students should note that films will be screened outside class time.

FREN3901**Reading Program 1 (Advanced)**

Department of French
UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of French at Distinction level

Any approved Upper Level option from the following: FREN3120, FREN3210, FREN3310, FREN3410, FREN3110, FREN3121, FREN3215, FREN3220, FREN3510 to be taken second year, plus an intensive reading program.

Note: Typically done in the second year, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN3910**Honours Preparatory Seminar**

Department of French
UOC6 HPW3

Prerequisite: 36 units of credit in French at Distinction level

Critical readings of French or Francophone texts which raise key issues in each of the three categories of Language, Literature and Culture. There is also an introduction to the nature and philosophies of research, research methods and techniques, and the principles of writing a dissertation and thesis.

Note: Typically done in the third year, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN4000**French Honours (Research) Full-Time**

Department of French
UOC24 HPW5

Prerequisite: 54 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

1. Two seminars (each HPW3 for 14 weeks). 2. A thesis workshop (HPW1 for 14 weeks). 3. A research project (thesis) of 12,000 to 15,000 words, in French, written under the supervision of a member of staff on a subject approved by the Department. Students from A or B streams follow an additional advanced language seminar (HPW3 for 14 weeks). Students from A stream may seek permission from the Head of Department to write their thesis in English rather than French.

FREN4050**French Honours (Research) Part-Time**

Department of French
UOC12 HPW3

Prerequisite: 54 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

1. Two seminars (each HPW3 for 14 weeks). 2. A thesis workshop (HPW1 for 14 weeks). 3. A research project (thesis) of 12,000 to 15,000 words, in French, written under the supervision of a member of staff on a subject approved by the Department. Students from A or B streams follow an additional advanced language seminar (HPW3 for 14 weeks). Students from A stream may seek permission from the Head of Department to write their thesis in English rather than French. Program spread over two years of study.

FREN4500**Combined French Honours Full-Time**

Department of French
UOC12 HPW2

Prerequisite: 48 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

The program usually consists of one session-length seminar in the Department of French, as well as a research project whose subject and nature have been approved by the two departments/Schools concerned. The exact details of the Fourth Year program and its assessment are subject to prior consultation and approval by the Heads of the two Departments/Schools concerned.

FREN4550**Combined French Honours Part-Time**

Department of French
UOC6 HPW2

Prerequisite: 48 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

The program usually consists of one session-length seminar in the Department of French, as well as a research project whose subject and

nature have been approved by the two Departments/Schools concerned. The exact details of the Fourth Year program and its assessment are subject to prior consultation and approval by the Heads of the two Departments/Schools concerned. Program spread over two years of study.

FUEL0040

Fuel Engineering for Ceramic Engineers

School of Chemical Engineering and Industrial Chemistry
UOC3 HPW2

An introduction to combustion technology, combustion calculations, burner design, furnace, kiln and boiler thermal design.

GENC2001

An Introduction to the Australian Economy

School of Economics

UOC3 HPW2

Excluded: ECON2104

This course will introduce students to the main issues and problems currently faced by the Australian economy. The aim is to acquaint students with the basics to enable them to understand contemporary policy debates, and to achieve economic literacy. The focus will be on macroeconomic policy debates, with special attention paid to problems associated with economic growth, inflation, unemployment and the balance of payments. In addition, some of the debates associated with aspects of microeconomic reform, such as privatisation and deregulation will be considered.

GENC3003

Personal Financial Planning

School of Banking and Finance

UOC3 HPW2

This course provides you with the knowledge and skills to manage your personal finances and investments both now and after graduation. Topics include buying a house or investment property with confidence, creating financial independence through superannuation, making a savings plan that works, how to invest in shares and managed funds, protecting yourself through insurance, making a will, understanding taxation, practical budgeting that works, identifying strategies for family members approaching retirement and tips for seeking professional financial advice.

GENC5001

Introduction to the Internet and Electronic Commerce

School of Information Systems, Technology & Management

UOC3

Students will learn to use the Internet, gaining an understanding of Internet applications such as e-mail, news-groups and navigating the World Wide Web to access information from around the world. Students will also design and implement a simple World Wide Web home page. All students will gain hands-on experience with applications and the information superhighway.

GENC6001

An Introduction to Marketing

School of Marketing

UOC3 HPW2

Excluded: MARK1012

Marketing is one of the core disciplines of successful management today. It impacts on society every day in a myriad of ways - creating new products and services; helping organisations understand what people want and need; helping people find products and services that meet their needs; communicating information that makes people's lives more efficient; creating exchanges that generate employment and wealth. But marketing also raises ethical issues about excess consumption, unhealthy obsessions and addictions, the impact we have on the environment and the communities in which we live.

This course is designed to provide students with an overview of these different aspects of marketing management. Insights are provided into the way in which business, government and not-for-profit organisations manage their marketing efforts. Topics include: the concept of marketing in different types of organisation; how to analyse the market and segment consumers within the market; buyer decision processes, organisational markets and organisational decision processes; the development of the marketing mix; products, brands and services; pricing, channels and promotion (personal selling, advertising, sales promotion and publicity); and marketing strategy within increasingly turbulent and challenging environments.

GENC6002

Marketing and the Consumer

School of Marketing

UOC3 HPW2

Excluded: MARK2051, MARK3072

This course is designed to provide students with an understanding of the relationship between marketing as a business discipline and consumer rights and responsibilities. It looks at marketing from the consumer's point of view, rather than the traditional marketing manager's point of view. The course covers topics such as the "culture" of consumption of products and services in developed economies; the history and development of the consumer rights movement and "consumerism" in the United States and Australia; the philosophical underpinnings of the movement and where it is heading with regard to issues such as personal privacy and anti-globalisation; the opportunities and concerns posed by new interactive and personalisation technologies; and attempts by marketers to respond in multiple ways to all these consumer pressures and challenges. A critical and questioning approach is adopted throughout the course.

GENC6003

Tourism: The Global Future

School of Marketing

UOC3 HPW2

It is claimed that tourism is one of the three growth industries of the new millennium, along with information systems and communications technology. In this course the wider significance of tourism is examined, looking at its economic, social, political and environmental importance. Topics include: tourism through the ages; tourism models and markets; the structure of the industry; the distribution of tourism products, and transport-related issues; governments and tourism - agents of regulation and promotion; the environmental, cultural and economic impacts of tourism, and the dilemmas that can arise when these appear to be in conflict; tourism planning, innovation and technology; special interest tourism, such as eco-tourism; and the future of tourism, particularly as it relates to sustainability issues. The course challenges students to think about tourism in new ways. This is facilitated with fieldwork to meet tourism operators, planners and regulators. The course also highlights career opportunities that tourism has to offer university graduates, and provides a starting point for students planning to take an MCom in Tourism, Hospitality Management and Marketing on completion of their undergraduate degree.

GENC7002

Getting Into Business

School of Business Law and Tax

UOC3 HPW2

Excluded: LEGT1711

This course examines how to set up, manage and develop a business within the limits of the law. The law regulates and provides protection and value to every aspect of the business and its activities. In a step by step method, using case studies, students will be exposed to the ideas and concepts which make up the ingredients of a successful business. Identifying the business opportunity; developing the concept; setting up the vehicle to conduct the business, securing premises; equipment and employees; dealing with creditors, suppliers customers and the government; and protecting the assets of the business are all covered in this course.

GENC7003

Managing Your Business

School of Business Law and Tax

UOC3 HPW2

Excluded: LEGT1711

Business management is the science of managing scarce resources, change and competitive forces in deregulated environment. Within this context the law has emerged as a key player in helping, guiding and prohibiting the behaviour of managers in small to medium businesses. The course examines the regime of laws and regulations, institutions and authorities that govern the function and performance of management in small and large business entities in Australia and internationally. The topics covered include: rights and obligations attached to property; dealing with suppliers, employees and subcontractors; developing legal financial models and business plans and undertaking legal and compliance audits and continuing governance reviews that provide focus to the business entities. The course will provide a substantial range of analytical research and practical skills to empower students to undertake the responsibilities of the contemporary manager.

GENC9002**Web Information Resources**

School of Information Systems, Technology & Management
UOC3 HPW2

The World Wide Web offers a wealth of information resources with deceptively simple search engines. The social implications of the Web will be critically examined as a background to the effective utilisation of these resources. This examination will lead to a better and deeper understanding of how these resources are organised and retrieved. Traditional approaches to subject analysis are combined here with comparison of different navigational techniques and an introduction to the variety of resources in the electronic environment.

GEND0201**Graphics and Contemporary Society**

College of Fine Arts
UOC3 HPW2

Online Course

During the last two decades of the 20th century computerisation in the graphic design industry brought about profound changes to the way we produce and consume knowledge just as the invention of printing transformed the dissemination of information in Renaissance Europe. Not only did the digital revolution transform the roles, working methods, project management and production processes for designers and printers, the digitisation of text and pictures influenced the aesthetics and formal aspects of the graphic image in print and electronic media, and stimulated discourses on visual experience and reconfiguration of the graphic image.

This fully online course comprises a series of lectures, learning activities and assessment tasks. It introduces topical issues in contemporary graphic design and its significance in society, including form and function in communication design, pictorial and narratives structures in visual communication, systems of icons and symbols as global visual language, and the influence of technology on aesthetics and visual experience. Assessment tasks will include individual and team projects to encourage group interaction and collaborative development of ideas and projects.

Excluded: COFA0201.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0202**Art & Cultures: The Language of Interactivity**

College of Fine Arts
UOC3 HPW2

Online Course

The last ten years have seen a proliferation of screen-based interfaces and online content, most of which is interactive in some shape or form. However, interactive media are in their formative stages and although widely experienced, the processes and language of interactivity are still poorly understood. This poverty of understanding is particularly apparent when compared to the shared cultural understanding of the language of the moving image for example, in which elements such as camera angles, lighting, sound and editing are all used to deliver a crafted experience.

This fully online course comprises a series of lectures, learning activities and assessment tasks that seek to discover and understand the underlying 'language' of interactivity. The content includes a broad history of interactive media (from non-computer interactions to wireless devices). It questions existing conventions of interactivity and explores the notions of play and interactive design (in which new ideas are 'found' by generating successive versions of a project).

The course aims to develop a set of ideas, approaches and practices that are essential to the creation of engaging interactive experiences. This includes a series of online lectures and discussions in which you will play an essential role in analysing and defining these experiences. Your assessment tasks will include individual participation and online team projects to encourage group interaction and collaborative processes, which are essential to discovering and defining this new exciting paradigm.

Please note: Whilst there are some technical elements to this course, it is not intended to be a course that teaches Flash programming or web design but rather the ideas that should underpin these, and other practices.

Whilst some existing knowledge of Macromedia's Flash or Director will be useful it is not essential for completion of the course.

Excluded: COFA0202.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0204**Seeing Light as a Design Tool**

College of Fine Arts
UOC3 HPW2

Online Course

Light. Its essential nature and characteristics are the focus of your study in this course. Light is a core ingredient behind high-end technology such as lasers, optical medical diagnostic tools, live performance event lighting machines, and computers. Light is a design tool unmatched in its flexibility and relative ease of application, and can reveal and enhance our experience of natural and built environments. You will design with light, without the need of sophisticated apparatus, complex equations or a detailed understanding of science. You will consider both the theoretical and practical aspects of light design, and the specific lighting requirements of virtual and real environments.

Your learning in this fully online course will be based on demonstrations and experiential observations that seek to understand the effect of light sources on your perception of space. Learning exercise and assessment tasks will include both individual and joint activities to encourage collaborative learning, and will be supported by online resources. Your activities will include problem solving, critical thinking and establishing a design process.

Your design decisions for a lighting design solution will be examined and related to an environment design project from design initiation through to documentation. This culminates in the production of a lighting design report. Access to a digital camera or a film camera & scanner is a requirement.

Excluded: COFA0204.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0205**Curating Art and Exhibitions**

College of Fine Arts
UOC3 HPW2

Online Course

Today's contemporary art practice includes temporary and site-specific projects, screen-based, digital and online art. The role of the curator, whether museum-based or freelance, has changed dramatically with the emergence of these new art practices. This course investigates key exhibitions and art projects internationally, providing a range of approaches to curating art today. It focuses on new models of exhibition-making both in traditional and alternative art venues, including public art.

Throughout the course, exhibitions and art projects in various parts of the world are used as case studies. With assistance from lectures and additional resources, your analysis of these projects will reveal an exciting range of solutions by curators to rapidly evolving media and exhibition possibilities. In addition, you will have opportunities to investigate and discuss new public art projects with reference to cultural and physical contexts.

A series of online lectures and resources is offered in a thematic format over 14 weeks. Your learning will be supported and enhanced by online learning activities, including group discussions and assessable tasks.

Excluded: COFA0205.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0206**The Art of Plants and Nature**

College of Fine Arts
UOC3 HPW2

Online Course

Have you ever looked at parts of a flower, and realised that the 'petals' you think you are seeing are actually an arrangement of modified leaves, perhaps not too different from leaves elsewhere on the plant? Have you thought about the pattern of veins on a leaf, the scars on a stem or a plants general growth habit?

This fully online course comprises a series of lectures, activities and assessment tasks that seek to increase your visual awareness of plant structures, the analytical and conceptual means by which you see and define them, the possibilities for pictorial and aesthetic outcomes, and the translation of these understandings into your own art/design products.

The course centres on visual analysis of natural forms including: structure, growth, environmental influence, issues of symmetry, division, and proportions the investigation of botanical form (plant morphology), and an introduction to some of the descriptions and traditions which make up artistic responses to plants and flowers. Practical examinations and studies will be made from: specimen, in situ sources and field studies. This course aims to help you develop imaginative and conceptual processes and skills, and to produce figurative or abstract 2D and 3D responses from your analysis of the systems of plants and nature.

Assessment tasks will focus on individual projects and online team activities that encourage participation and collaboration.

Excluded: COFA0206.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0207**Textiles - Technology and Tradition**

College of Fine Arts
UOC3 HPW2

Online Course

In 20 years time, will clothes be intelligent, self cleaning, or grown from a living layer of tissue?

The above statement is a question about the possibilities of where the future of textile design is leading. This allows you to reassess what a textile design can be. This fully online course looks at the relationship between traditional techniques and contemporary technology and how developments across both areas have revolutionised the design process and how such a synthesis opens up new possibilities in defining the boundaries of what constitutes a fabric.

You will learn how to analyse textile design from fundamental theoretical and historical viewpoints; you will be able to identify how contemporary textile design has been influenced by the interrelationship between traditional and technological processes; through experimenting with your own individual projects you will examine the influence of traditional processes on technology and how technology is reinventing traditional techniques. In reaction to these issues you will provide individual responses through practical projects. You will also learn how to appreciate the scope of textile design by exploring the innovative possibilities of future textile developments.

Excluded: COFA0207.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0208**Fashion 1980 - Now**

College of Fine Arts
UOC3 HPW2

Online Course

Why do high-heeled shoes feature in the television series *Sex and the City*? How are fashion, gender and sexuality linked? Why can women now wear a cheongsam dress and trainers? Fashion history and theory is one of the most rapidly developing areas of humanities research, drawing

upon new theories of the body, social space, surfaces, ephemerality and popular culture.

This course examines fashion as a vehicle of self-fashioning since the 1980s. It will present a variety of theoretical methods to interpret the fashion choices of post-modern society.

You will study themes including fashion and identity politics; the 'post-subculturalist'; fashion design and the street; gender and consumerism; cross-cultural dressing. You will examine topics including music and dress; dress and sexuality; vintage, retro and second-hand clothing; 'anti-fashion'; 'costume play' and Japanese 'cuteness' (kawaii); and the spectacle of the contemporary fashion parade.

The course will include topics and collaborative assessment in which 'net society' plays a role. Your tasks may range from online diaries to role-plays as a fashion victim having to defend your stance.

Excluded: COFA0208.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0209**Cross Cultural Sculpture**

College of Fine Arts
UOC3 HPW2

Online Course

This is a practical, online sculpture course that will introduce you to ways of making contemporary sculpture and installation art through online projects. The two studio projects are designed to help you develop your own future creative enquiries as the activities mimic the processes artists employ to make artworks that are content rich and idiosyncratic. Ordinary skills, such as cutting, assembling, sanding and gluing, painting, sewing, stapling and snap shot photography are required for everyday methods of construction and recording. Materiality will be investigated using culturally encoded found objects and commonplace 'stuff'.

Your art making will be informed by studio theory components that will enhance your awareness and understanding of how and why contemporary artists often blend and quote diverse cultural practices in their artwork. Online group discussions and a collaborative online studio theory project will create a community of scholarship and critical feedback to support your art making.

The interdisciplinary nature of contemporary sculptural practice will be explored in an installation project, with an invitation to experience a diversity of sculptural methodologies. Interdisciplinary approaches will develop from an initial project that creatively investigates the more familiar, object based sculpture. You will need access to a digital camera.

Excluded: COFA0209.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0210**Visual Identity in the Built Environment**

College of Fine Arts
UOC3 HPW2

Online Course

It may seem obvious why a fashion boutique stamps a big logo on the front of its commercial premises, however, ask yourself: why do local councils label street signs in their municipality with a council emblem, or why do public parks nowadays have a logo designed to represent them?

Most environments we encounter on a daily basis have been designed to carry a specific visual identity or brand. Some of the more obvious examples include retail stores, shopping malls and themed parks. Today, however, even train stations, public parks and city districts are being visually branded.

In this fully online course, you will examine a range of commercial and non-commercial spaces and consider the way visual identity has been programmed into them. Through these examples you will learn how 'spatial branding' affects the experience of people using a space.

This course includes a series of online lectures, individual and group tasks and site visits (in your locality) that will provide you with insight needed

to identify social, commercial and psychological implications arising from the practice of 'spatial branding'.

Excluded: COFA0210.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0211

Print Advertising for a World Market

College of Fine Arts
UOC3 HPW2

Online Course

When global giants Coca Cola first entered the Chinese market, its people interpreted the English name with a strange Chinese meaning which was 'bite the wax tadpole'. Not surprisingly, Coca Cola began as a poor selling product in the new market. Today, its interpretation has been amended to 'happiness in the mouth' thus receiving far greater commercial success.

This fully online course considers such issues when looking at cross-cultural representation and perception in graphic advertising design. It invites you to analyse some interesting advertising design case studies, with emphasis on print media advertising from magazine ads to billboard posters. Nowadays, with many companies trying to sell their goods in the global market, there is a claim that the developed world has evolved into a global monoculture. Nevertheless, designers and entrepreneurs still need to be aware of cultural nuances.

This online course offers you an opportunity to explore global advertising's graphic design strategies through a series of structured themes. The course will help your understanding through activities that require individual reflection, discussion and project-based collaborative interaction.

Excluded: COFA0211.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0212

Textiles for Interiors - Senses and Spaces

College of Fine Arts
UOC3 HPW2

Online Course

This fully online course will help you learn why textiles are important in the design of interiors. Although their role is often overlooked, fabrics have always played important roles in defining both the atmospheric and spatial qualities of interiors - for example, textiles are sometimes used to filter light and muffle noise.

Exploring various dimensions of visual aesthetics, you will learn about contemporary trends in textile and interior design, and possible futures of textile design using new digital technologies. These will be placed in an overview of the context of an historical timeline. Through personal analysis, shared experiences and observation, you'll understand more about how textiles affect your home and work environments.

This online course offers you opportunities for both individual and collaborative learning activities. These will include problem solving, critical thinking and establishing design outcomes that support you in developing a heightened awareness of the sensory and spatial influences of textiles on interior settings.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0213

Contemporary Aesthetics in Digital Architecture

College of Fine Arts
UOC3 HPW2

Online Course

How will tomorrow's built and landscaped environments look and feel? In these first few decades of the digital age, the planet's leading architects have been discovering the creative potentials of on-screen design tools which behave very differently from pens, slide rules and paper.

In this fully online course, you will examine how emerging convergences of diverse technologies are influencing how architects aim to reinvent the way buildings look and feel – not only to answer humanity's next challenges but to continue telling humanity's stories through aesthetics.

Through reading, images, reflection, discussion, analysis and writing, you will learn how futuristic architects are styling tomorrow's built and landscaped environments. And you'll discover why 21st century architecture will look and feel radically different from the monuments of history.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0214

Creative Thinking Processes

College of Fine Arts
UOC3 HPW2

Online Course

Have you ever had an idea that you wanted to push and develop further, but you weren't sure how to do it? This fully online course will introduce you to some of the many tools that can facilitate creative thinking. The processes of analysis can help to extend possibilities beyond predictable outcomes, and the same thinking tool can be used across many different disciplines to create new, more integrated and original options.

We will explore visual, verbal and physical ways of transforming ordinary ideas into fantastic ones. Using taught techniques such as the Syntectic Pinball Game you will learn to understand more clearly what happens when the creative mind is at work.

We will test the principles of interconnectivity, non linear (associative) thinking, and use maps, models and metaphors to develop your creative thinking. Famous creative thinkers like Leonardo da Vinci, Dr. Edward de Bono, George Lucas, Nicholas Roukes, Malcolm Gladwell and Walt Disney use/used a wide range of processes which we will critically explore.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0216

Celebrity and the Face in Australian Cinema

College of Fine Arts
UOC3 HPW2

Online Course

Australian actors, directors and cinematographers, play a disproportionately prominent role in the global film industry, given the relatively small size of the Australian population and film industry.

Where does this immense creativity come from? In this fully online course, you will learn how a particular style of performance and cinematography emerged in Australia in the first century of cinema. From early technical experiments in Australian cinema to the casting of performers whose body types differed significantly from European and American cinema in the same period, you will examine how different ideas of beauty and movement developed in Australian cinema. In more recent cinema, you will assess how these earlier ideas affect performance style when actors go global and become 'stars'.

You will also explore ideas about the image more generally, - the idea of charisma and photogeneity, the importance of the face and the close-up in the evolution of the cinematic image and the links which these ideas have to the history of painting, from the icon to abstraction.

You will be engaged in interactive activities and discussion that will support your development of a deeper understanding of the phenomenon of celebrity and a greater appreciation of Australian cinema.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0217**The Art of Scientific Visualisation**

College of Fine Arts
UOC3 HPW2

Online Course

How have imaging and visualisation technologies changed our lives? This fully online course will introduce you to contemporary and historical crossovers and collaborations between art, science and medicine, and how relationships between these disciplines have evolved from the seventeenth century to the present time.

This online course will provide you with opportunities to investigate a vast range of images generated by visualisation techniques in the life sciences; from drawing through to microscopy, anatomical photography, DNA sequencing, radiology and MRI scans.

This course is designed to enhance your interest in and awareness of medical and scientific imaging, and to support you in exploring its interdisciplinary potential with the visual arts. Through a series of lectures, independent research and tasks as well as online group activities, you will become aware of the varied history and current implications of medical imaging.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0218**Experiencing and Contemplating Art**

College of Fine Arts
UOC3 HPW2

Online Course

This online course will help you better understand the processes involved in observing art from different perspectives and enable you to write an informed essay on the exhibition of your choice. It is also a forum for a discussion about art critique and its relationship with art practice and art history.

You will be asked to visit galleries and choose an exhibition, address the ways in which space, placement, context, etc. impact on our response, research the artist(s) and works and relate those findings to broaden and contextualise your understanding of the exhibition and the artwork. You will be shown how to undertake research into art with the goal of improving your capacity to address art in your own lives.

The course will be conducted through a series of individual and group online assignments including research, discussion, reports and analysis, using images of artworks and text. You will be given support and feedback. There are also four lectures which discuss topics such as: subjective and first person accounts in observing art; perceptions and expectations; artists' perspectives and a range of debates on the role of the artist in determining the meaning of the work; can art critique stand the test of time; can art reviewing substitute for art historical writing? These lectures will inform your research.

By the end of this course, you will have a better understanding of artworks and the creative processes of art-making and writing about art. Importantly, through the online interactive interchange of ideas you will have contributed to the discussion in these fields.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND1202**Drawing the Body: Studies of Surface Anatomy**

School of Art
UOC3 HPW0

Excluded: SART 2829.

This course provides an introduction to human anatomy through the studies of comparative anatomy, skeletal structure, musculature and a perspective on the history and philosophy of anatomical images. A practical examination of the structure, form, and function of the body develops an understanding of the human figure. Emphasis is placed on direct observations of the nude. Students draw from the skeleton, casts, and prepared anatomical specimens. A range of approaches are covered that will encourage students to understand the basic anatomical constructs.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1203**Drawing the World From Within/Without**

School of Art
UOC3 HPW2

Excluded: SART2832.

Drawing - The initial response to the realisation and transformation of an idea, the delineation of shape or the foundation of form. Based upon practical observation, students are encouraged to understand both the inter-relationship of form and content and the creative possibilities of media and techniques. An awareness of the methods of interpretation and translation through the drawing process is a focus of this course. Drawing as the evidence of inquiry, combined with the development of conceptual skills, forms the central structure of this course.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1204**Studies in Painting**

School of Art
UOC3 HPW0

Excluded: SART1502.

Through paintings we can imagine other times, cultures, psychologies. Practical engagement with painting as a creative form involves the individual in selective and particular imaginative, intellectual and perceptual processes. This course provides an introduction to ways of looking, seeing, thinking and using materials to make paintings. The course involves both theoretical and practical exploration of visual elements to construct form-space relationships within a two-dimensional field. Practical studies include the simple preparation of painting supports, the mixing of tones and colours and experience in using a range of basic materials. The subject includes a supervised excursion to the AGNSW.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1205**Making a Print**

School of Art
UOC3 HPW0

Excluded: SART1591.

This course will cover theoretical and practical aspects of producing a fine art print. The theoretical component will deal with the context in which artists produce prints; describing the contemporary world in which rapidly developing technology has provided the means of producing multiple, repeatable images very easily via the photocopier, fax machine and computer printer. The basic differences between a 'reproduction', a commercial printed image and a 'fine art print' will be discussed, and the conventions of annotating and numbering a printed edition will be covered. The practical component will enable the student to become familiar with some of the fine art printing techniques, such as etching, relief, lithography and screen print through studying the work of a selection of Australian printmakers and techniques demonstrated. Students will have the opportunity to produce a print using one of the above mediums and to mount and document it appropriately.

Note: Lecture/seminar/workshop.

GEND1208**Studies in Sculpture**

School of Art
UOC3 HPW0

Excluded: SART1601.

This sculpture course provides practical experience in the appreciation of space and form. Theoretical and historical information is discussed relating to the discipline as it is practised at present, ranging from skilled crafts to realising concepts. In particular, the use of space as a primary element in contemporary sculpture is investigated. This is developed through an examination of contemporary inter-disciplinary art works. Practical work is structured to provide experience and exploration of the ideas put forward in discussion. Elementary skills are demonstrated in inexpensive materials and students are encouraged to grapple with the handling of space as it encounters form.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1209**Black and White Photography**

School of Media Arts
UOC3 HPW2

Excluded: SOMA1521, SOMA2521, SOMA3521.

This course provides an introduction to and overview of the black and white analogue photograph in the context of contemporary visual arts. Demonstrations and workshops to enhance skill acquisition in the use of 35mm cameras and the knowledge of B/W darkroom procedures provide the basis of the practical component of this course. Practical workshops and topics include: 35mm camera operation; B/W film types and formats; basic natural lighting techniques; light metering; film exposure and processing; print production and darkroom procedures; print finishing and presentation. Students undertake a gallery visit to view contemporary photomedia work to support a written research component. Slide lectures and topics introduce the student to the History of Photography and the Photographic Image in Contemporary Visual Arts. Projects are set which focus on the production of photographic images for contemporary visual arts.

GEND1210**Colour Photography**

School of Media Arts

UOC3 HPW2

Excluded: SOMA1521, SOMA2521, SOMA3521.

This course provides an introduction to and overview of the colour analogue photograph in the context of contemporary visual arts. Demonstrations and workshops to enhance skill acquisition in the use of 35mm cameras and the knowledge of colour darkroom procedures provide the basis of the practical component of this course. Practical workshops and topics include: 35mm camera operation; colour film types and formats; basic natural lighting techniques; light metering and film exposure; print processing; colour darkroom procedures; print finishing and presentation. Students undertake a gallery visit to view contemporary photomedia work to support a written research component. Slide lectures and topics introduce the student to the History of Photography and the Photographic Image in Contemporary Visual Arts. Projects are set which focus on the production of photographic images for contemporary visual arts.

GEND1211**The Artist's Studio**

School of Art

UOC3 HPW0

This course looks at the relationships which have existed between artists, patrons, consumers, dealers, auctioneers and critics, and discusses the directions which the art market may take in the era of the Internet. The lectures are designed for the interested non-specialist and involve visits to artists' studios, galleries, museums, and auction houses. The student will learn how to make informed decisions concerning the collection of art. Topics will include the effects which new technologies have had upon the traditional arts of painting and drawing, the impact on artists of concepts from diverse cultures and the influence of political ideas on the deskillings of the contemporary artist.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1212**Analysing a Picture: Composition and Design in Art**

School of Art

UOC3 HPW0

Apart from paints, pastels and pencils, most of us now possess some image-making device, whether it be a camera, a video recorder or a computer with a graphics program. There is a need for understanding key ideas about pictorial composition if we wish to create better images with these tools.

This course is intended to provide an introduction to the analysis of visual works of art for the interested non-specialist. It introduces students to the formal aspects of the visual arts, such as the fundamental elements of colour, shape, size and texture, and explores some of the competing sets of organising principles which have guided artists in the creation of visual images.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND2201**Art Therapy**

School of Art History and Theory

UOC3 HPW0

Excluded: SAED2476

The aim of this course is to explore the integration of art and therapy in theory and practice. Students will be introduced to the concepts, philosophies and methodologies of Art Therapy as an emerging discipline in its own right. The course will look at the use of art within the traditional

frameworks of psychology. It will explore various forms of the visual arts as a medium for self expression, communication and growth. It is intended for the non-specialist interested in the psychological implications and effects of image making.

Note/s: Paddington Campus.

Excluded: SAED2476

GEND2202**Multicultural Contexts**

School of Art Education

UOC3 HPW2

Excluded: SAED2475

The aims of this course are to increase students' knowledge and awareness of the cultural diversity of Australian society, develop their sensitivity to the needs of minority groups and explore the implications of multiculturalism for policies and practices represented through the lens of art and art education.

Through lectures and discussion groups, the course will consider Australia's history of multiculturalism and look at the issues and possibilities arising for the visual arts from multicultural education.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2475

GEND2205**Dialogues and Communities**

School of Art Education

UOC3 HPW0

This course enables students to become familiar with issues and contexts of contemporary community arts, including cultural development and democracy, cultural resources, real wealth/community value and social capital. Students experience a range of community activities e.g. events, public art/design projects, interest groups together with traditional applications of community arts practice seem as social and cultural development. Students undertake preparation of funding applications, field work in selected community settings and collaborative projects.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2479

GEND2206**The Art Museum and Art Education**

School of Art Education

UOC3 HPW0

This course aims to make students aware of the ideology and philosophies of art museums through an understanding the broad educational functions of the museum including the vernacular appreciation of art and the development of a lifelong approach to learning. Students have the opportunity to observe the educational functions of the art museum within a diversity of contexts and systematically investigate the roles which the museum performs within our society. Field work in selected museums and the use of videos, discussion and group tasks course experiences include field work in museums video discussions and group work.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2480

GEND3218**Psychoanalysis and Art**

School of Art History and Theory

UOC3 HPW0

Excluded: SAHT2644.

The subject is designed to develop a critical understanding of the relationship between specific theories of psychology, psychanalysis and art practice. The motivation, reception and interpretation of works of art will be studied in the light of such theories as Freud's 'metapsychology', Jung on Dreams, Laura Mulvey's notion of the 'gaze' and Michael Foucault's histories of madness and sexuality. Art works examined will be representative of a wide range of movements and traditions.

Note: HPW2 lecture/tutorial/seminar. Kensington Campus. Exclusions apply to some Faculty of Arts and Social Sciences courses.

Excluded: COFA2256.

GEND3230**Art, Money and Power**

School of Art History and Theory

UOC3 HPW2

What is the relationship between art and the economic and political life of our society? Art and power have gone hand in glove from medieval feudalism, through the emergence of mercantile capitalism and centuries of capitalism and colonisation to the global market and cultural infrastructure of today. Those who wielded political and economic power have sought a reflection of greatness, civility, and taste in their art patronage, connoisseurship and collecting.

This course explores the nexus between art, money and power in both historical and contemporary society.

Note/s: Lecture/tutorial/seminar.

GEND3231

Picturing Death: Art and the Human Predicament

School of Art History and Theory

UOC3 HPW0

If we understand death, will we understand life? Many artists have thought so, and in picturing death, they have given us insight into the meaning and value of life. Looking death in the face, artists from different epochs and cultures have produced extraordinary images that are sometimes troubling, sometimes healing; sometimes dispassionate, sometimes deeply moving.

This course explores the art of death, including funerary and memorial images of ancient cultures, images of war and revolution, images giving expression to our experience of AIDS and other catastrophes of the contemporary world. The course ranges from the funerary art of ancient cultures to the contemporary images of Aboriginal artists who express traditional spiritual values in modern forms and media.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

GEND3232

Pornography, Art and Politics

School of Art History and Theory

UOC3 HPW2

Excluded: SAHT2643, SAHT9133.

This course will explore the boundary between art and pornography and the social function of that boundary in western society. It will look at the ways in which bodies are eroticised and/or designated as 'pornographic' or perverse. Concepts such as fetishization, voyeurism, sadism and masochism will be discussed in relation to art history and contemporary art practice. The politics of pornography will be debated in relation to such issues as gender/feminism, child sexuality, censorship and AIDS.

Note/s: Lecture/tutorial/seminar. Kensington Campus.

Excluded: SAHT2643

GEND3233

Scandals of Modern Art

School of Art History and Theory

UOC3 HPW2

From its inception, modern art attracted outrage, rejection and ridicule from some audiences and amazed approval and critical engagement from others. Many artworks now viewed with profound respect were greeted initially with disbelief and affront. Modern art rarely met with polite boredom. The taint of scandal offers a key to the value and interpretation of modern art. This course explores modern art through some of the controversies and reactions of audiences and power-brokers. It considers derisive response to Cubism, Hitler's hostile closure of the famous Bauhaus and his exhibition of 'degenerate art' (and the long queues of people who took the opportunity to see the work of the modern 'masters'), the post-revolution repression of Russian avant-garde artists. Closer to home, some Australian frauds and scandals provide the basis for discussion on Australian attitudes to art, and artists' attitudes to Australia.

Note/s: Lecture/tutorial/seminar.

GEND3238

Memory and Self

School of Art History and Theory

UOC3 HPW2

Excluded: SAHT2213.

This course traces contemporary ideas of body and subjectivity through the work of a range of artists and writers. Its major focus is on the experience of memory and self-understanding. It addresses the questions of how memory is constituted and how it is crucial to our sense of self; of how memory affects our relations to images and objects, and how memory is represented. The course also examines human relations to space, the themes of horror and humour, and the topics of gesture, performativity

and mimesis. Contemporary art and writing practices will be used as the basis for a creative engagement with theoretical ideas. Focus texts include writing by Christian Boltanski, Georges Perec, Oliver Sacks, Dori Laub, Julia Kristeva, Jeff Wall, Judith Butler and the stories of the 'stolen children'.

Note/s: Lecture/tutorial/seminar. Kensington Campus.

Excluded: SAHT2213

GEND4202

Design and Human Functioning

School of Design Studies

UOC3 HPW2

Excluded: SDES1103

This course will introduce students to some of the psychological and physical characteristics of individual human functioning as factors in the design of objects, surfaces and spaces. The concepts explored will include the psychology of perception, theoretical approaches to the analysis of human behaviour, basic anatomy/biology/physiology, basic ergonomics and anthropometrics, analysis and measurements of the relationship between the human body and the design of macro and micro environments.

Note/s: Paddington Campus

Excluded: SDES1103

GEND4203

Design Management

School of Design Studies

UOC3 HPW2

Excluded: SDES2171, SDES2116.

This course will develop students' understanding of principles applied to design management, and the place of design practice within the commercial environment both in the public and private sector. Students will cover the above concepts in one session of study. They will also be introduced to the broader question of general management, and the importance of the development of a design culture within organisations whether companies or institutions.

Note/s: Paddington Campus.

GEND4204

Designing: Practical Studies in Design

School of Design Studies

UOC3 HPW0

This course introduces students to the study of the multi disciplinary nature of design. It is organised to extend the student's level of understanding about the way in which concepts and processes in graphic, object and environments design may be integrated to contribute to the development of richer appropriate design solutions.

Note/s: Paddington Campus.

GEND4205

Design Communications and Presentations

School of Design Studies

UOC3 HPW0

This course examines the issues which affect the communication and presentation of visual information in design and other disciplines which deal with text and images. A series of lectures and tutorials will introduce students to the theories and principles of visual communication and information design. Students from different disciplinary backgrounds will be able to interact, acquire, develop and use skills based on visual thinking and critical analysis to address issues dealing with textual and visual communication in society. The course provides opportunities for students to examine conventional communication methods and to approach creatively the dissemination of visual information in ways which are well conceived, communicative, interactive, responsible, comprehensible and user-friendly.

Note/s: Paddington Campus.

GEND4206

Integrated Design Studio

School of Design Studies

UOC3 HPW0

This course provides students with a study of the multidisciplinary nature of integrated design practice through their involvement in a series of design projects. The aim is to extend students' level of thinking and understanding about the ways in which the communication of concepts and processes

in design may be integrated to contribute to the development of richer, more appropriate design solutions in the commercial context.

Note/s: Paddington Campus.

GEND4207

Designing: Models as a Tool for Design Communication

School of Design Studies

UOC3 HPW0

Excluded: SDES1107.

This course is an introduction to basic model making techniques, materials and equipment. Models are a three dimensional method of expressing design process intent and approach. The students will be made aware of the place of models as a communication tool in an array of design situations. The various types of models required for differing objectives will also be described. The course will consist of model making exercises and visual references through lectures and slide shows. Students will be encouraged to experiment and develop understandings and skills which will enable them to appreciate their designs through practicality. Through the exercises and project work, students from varied disciplines can interact through their creativity and experience working approaches from a discipline other than their own specialist study area. The assessment of this course will consist of a progressive evaluation as well as both verbal and visual presentations of the completed exercises and project.

Note/s: Paddington Campus.

GEND4208

Working with Ceramics

School of Design Studies

UOC3 HPW2

Excluded: SDES1155, GEND1206

This course introduces the student to ceramics through historical, theoretical and practical investigations. An understanding of the ways clay has been used by different cultures at different times will inform the student as to why certain conventions have been established in the medium. An emphasis is placed on the ideas and practices of contemporary ceramics. Practical work is carried out in such a way that demonstration and application will be developed in graduated stages so that the potential for a satisfying result is continually expanded.

Note/s: Paddington Campus.

Excluded: GEND1206

GEND4209

Working with Jewellery

School of Design Studies

UOC3 HPW2

Excluded: SDES1154, GEND1207.

This course introduces students to the work and practice of current Australian studio jewellers and object makers. Through projects and exhibition visits students will gain insight into the concepts and ideas that are currently explored. The course is designed to challenge perceptions of body adornment and traditional notions of jewellery. Through studio activities students will learn the skills of jewellery making processes and techniques, idea generation and their application to the realisation of project work.

Note/s: Paddington Campus.

Excluded: GEND1207

GEND4210

Textiles and Fashion

School of Design Studies

UOC3 HPW0

Excluded: SDES2167.

This course introduces students to contemporary textiles and their relationship to fashion. Theoretical and practical aspects of textiles and fashion are covered through lectures on the concepts, work and ideas of leading textile artists and designers. The theoretical component deals with the context in which contemporary artists work, the conceptual basis for their work and how historical and social references are made.

The practical component enables students to become familiar with some of the elementary techniques used by leading practitioners to make textile and fashion items. The emphasis of the course is on creating textiles and surface designs for textiles and fashion rather than garment construction. Students learn some basic techniques in embroidery and the surface design processes of dyes, dyeing and printed textiles.

Note/s: Paddington Campus.

GEND4211

Design in Performance

School of Design Studies

UOC3 HPW2

Excluded: SDES2177, COFA7061

This course covers the major elements of design in staging large scale events including theatre performance. Theatricalisation and design theming of public occasions, community ceremonies and sporting events is an established design trend. Students are introduced to the design process on which staging of performance events in various contexts are based. Through close examination of the characteristics by which such occasions are represented and communicated to audiences, students systematically investigate the crafts and contemporary theories of staging such events. A design brief is set for students to construct, draw, design and complete.

Note/s: Paddington Campus.

Excluded: SDES2177

GEND4212

Design in Adornment and Costume

School of Design Studies

UOC3 HPW2

This course considers clothing as cultural evidence and through a series of lectures and workshops provides students with the opportunity to both investigate the function and meaning of clothing and examine its codes and cultural significance. Clothing and costume provides a unique area of study. It is a potent combination of function, design and cultural meaning. Students are able to communicate their understandings through drawing, designing, constructing and making in a studio environment.

Note/s: Paddington Campus.

GEND4213

The Arts of Aboriginal People and Torres Strait Islanders

School of Design Studies

UOC3 HPW0

Excluded: SAHT1627.

This course is an ideal means from which to access basic cultural information viewed through art works. No prior knowledge of art or anthropology is necessary to participate in the lectures, museum and gallery visits or any practical work undertaken during the term. The course focuses on one region and a specific art form, like fibre objects or sculpture. Both historical and contemporary work are examined.

Note/s: Paddington Campus.

GEND4214

Surface and Image in Tapestry Weaving

School of Design Studies

UOC3 HPW2

This course will introduce students to tapestry weaving through historical, contemporary and practical investigation. Theoretical and practical aspects of tapestry will be covered through lectures on the concepts, work and ideas of leading tapestry artists. The theoretical component will deal with the context in which contemporary artists work, the conceptual basis for their work and how historical and social references are made through woven tapestry.

The practical component will enable students to become familiar with ways of weaving textured surfaces and transferring images to woven tapestry. Painted, graphic, digitally scanned or text base images will be developed and woven for miniature, shaped or larger scale tapestries.

GEND5201

Landscape Animation

School of Media Arts

UOC3 HPW3

Excluded: 4810 Bachelor of Digital Media and 4800 Bachelor of Fine Arts major Time-Based Art

Students will be taken through a range of workshops and animation techniques specifically designed to experience nature frame by frame. Students will experience five days of animation in the landscape around historic Broken Hill. This unique approach to animation draws upon environmental sculpture as an aesthetic for animation using digital video. Each student will shoot edit and score their own digital animation in the Australian outback. Students will learn valuable skills in digital camcorder and digital editing as well as developing classic animation timing skills.

GENE1011**From Catchment to Ocean**

School of Civil and Environmental Engineering
UOC3 HPW2

The environmental amenity of water in catchments, waterways and the coastal zone is under increasing threat from human generated pollutants such as rubbish, heavy metals, pathogens, nutrients, pesticides and other toxic compounds. This subject provides a non-technical introduction to this threat and what can be done about it. The path and transformation of the pollutants from the catchments where we live, to rivers and estuaries, and finally the oceans is covered. Measures for controlling pollutants and disposing of pollutants, inclusion of: catchment management on-site techniques; gross pollutant traps; ocean outfalls; chemical and biological treatment; and wetlands will be covered. Finally, the environmental impacts of these pollutants on our waterways are discussed. In particular, human health issues, eutrophication and ecological impacts will be examined.

GENE1012**Tools for Ecologically Sustainable Development in Corporations and Regions**

School of Civil and Environmental Engineering
UOC3 HPW2

A brief introduction to Ecologically Sustainable Development (ESD) principles and the social, economic and political context in which they have arisen, and in which they are implemented. A non-mathematical introduction to developing methods and techniques (tools) being used by regional and corporate environmental managers to implement ESD principles in organisations and regions. These tools include a range of material accounting techniques that can be applied at a product level (Life Cycle Assessment), to a corporate and regional level (Materials Flux Analysis), to a regional and national level (Total Material Requirement, Ecological Footprints, Material Inputs per Service Unit). Physical indicators of the State of the Environment at these levels will be introduced. A comparison will be made with the use of economic indices, such as GDP and current account deficit, used in the National Accounts to control the state of the economy.

This course is offered in winter session 2003

GENE3051**Solar Cars - Speed of Light**

School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW2

Solar powered racing cars capitalise on state-of-the-art developments in engineering and technology, especially photovoltaics, aerodynamics, motor design, electronics, automotive engineering, battery technology, communication and global positioning, software technology, and race strategy development. Besides learning about solar racing cars, enrolled students participate in a "virtual" World Solar Challenge race from Darwin to Adelaide (complete with virtual media stops). In addition, enrolled students participate as a team in the design, construction, testing and racing (against their classmates at the end of session) of model-scale solar powered cars from a simple kit. This class is designed to give non-engineering students a broad perspective in basic engineering principles, like problem solving, design, project planning, technical writing and oral presentation. No previous knowledge or experience in any of the above-mentioned areas is assumed.

GENE4001**Biomedical Engineering: Technology in Medicine**

Graduate School of Biomedical Engineering
UOC3 HPW2

The objective of this course is to explore current and future biomedical devices, procedures and technology. Students from non-engineering backgrounds will gain an understanding of the history and development of current technologies such as the bionic ear, artificial heart, bone marrow transplantation, and CT and MRI scanning. Trends and possible future developments will be discussed.

Classes will be held in S1 on Wednesdays 10am-12noon.

GENE7001**Oil & Gas: The Lifeblood of Society**

School of Petroleum Engineering
UOC3 HPW2

The role of oil and natural gas as our main source of energy. The environmental impact of drilling and production of oil and gas. The role

of the Federal and State Governments in the Australian Petroleum Industry. Visit to the Federal Agency in Canberra responsible for monitoring the industry. Visit to a gas field close to Sydney. A practical, hands-on course with presentations by industry experts. Oil/gas companies and the future of petroleum in our lives. Planning, drilling and completion of oil/gas wells. Data acquisition and analysis. Petroleum Economics.

GENE7801**Energy and Mineral Resources - Use or Abuse?**

School of Mining Engineering
UOC3 HPW2

This course examines Australia's importance as a vast source of mineral and energy resources. It concentrates on the impact the continued extraction and consumption of non-renewable resources has on our physical, social and political environment. The issues of global warming, native title, recycling and the viability of alternative energy sources are dealt with in detail.

All course material is delivered via WebCT. A number of optional workshops are scheduled throughout the duration of the course to promote discussion on relevant topics and to present additional information.

A more detailed description of this course together with the semester timetable can be found under the timetable information link: http://webct.edtec.unsw.edu.au/public/GENE7801_S1/index

GENE8000**Getting the most out of Spreadsheet & Database Applications**

School of Computer Science and Engineering
UOC3 HPW2

Spreadsheets and databases are two of the most commonly used and powerful computer tools yet they are often poorly utilised and the reasons for using one rather than the other are poorly understood. Many people purchase Microsoft Office which comes bundled with Microsoft Excel and Microsoft Access - a spreadsheet and a database application - yet while many people have some familiarity with Microsoft Excel, Microsoft Access is rarely utilised. This course aims to explain in straightforward terms the concepts underlying both of these powerful pieces of software so that students can exploit them effectively for both their studies and future careers. It will investigate how to design and implement effective spreadsheet and database applications. Students should also be able to transfer these skills to other, similar spreadsheet and database packages. Students will be expected to have personal copies of Microsoft Excel and Microsoft Access on their own computers.

Note(s): This course may not be taken by students enrolled in a CSE program or major.

Further Information: CSE class page www.cse.unsw.edu.au/~ge8000

GENE8001**Designing and Creating Computer Games**

School of Computer Science and Engineering
UOC3 HPW2

Students will work in groups to create a computer game of their choosing using "Game Maker". (see <http://www.gamemaker.nl/>). With Game Maker, students can use simple drag-and-drop actions to create professional looking games without having to write any code in a traditional programming language. Each week, there will be a one hour lecture followed by one hour of supervised group work on the game. Lectures will cover both the art (e.g. liberal arts, the social sciences, and psychology) and science (e.g. computer graphics, artificial intelligence, human-computer interaction, security, distributed programming and simulation) of computer game design.

Note(s): This course may not be taken by students enrolled in a CSE program or major.

Further Information: CSE class page www.cse.unsw.edu.au/~ge8001

GENL0230**Law in the Information Age**

Faculty of Law
UOC3 HPW0

This course will give students an overview of the operation of new media and communications services under Australian law, examining both the legal requirements and the policy reasoning behind the way in which media and communications are regulated. It will cover five broad areas: how laws are made, changed, interpreted and enforced; electronic commerce and what it means for business, consumers and the community; the laws governing licensing, ownership and control of

telecommunications, radiocommunications and broadcasting enterprises, and whether these laws are appropriate and effective to deal with new technologies and services; restrictions on media and online content, including classification and censorship, and regulation of content; and protecting intellectual property and reputation, covering copyright, trademarks and defamation

GENL0250

Sport, Law and Society in Australia

Faculty of Law
UOC3 HPW2

The rise of organised sport coincided with Australia's development as a nation playing a major role in developing Australian identities. As one of Australia's major cultural practices, participation and success in international sport became an essential element in projecting Australia on the global stage. In the late twentieth century sport became one of nation's fastest growing industries. This course explores the history of Australian sport and the development of a body of law to underpin its place and function in Australian society. Topics include sport and Australian nationalism; the rise of organised sport in Australia; development of sports governance; the intersection of sport and the law in issues of race, gender, ethnicity and religion; the debate between amateurism and professionalism; Australian sport on the global stage; doping and the law, the court of Arbitration for sport; the impact of corporate interest in Australian sport.

GENL1020

World Religions: Customs and Laws

Faculty of Law
UOC3 HPW2

Religion constitutes a significant factor in our understanding of how a society orders and regulates itself. This course offers students a general introduction to five of the world's major religions with a special focus on the manner in which their specific customs and laws impact upon the behaviour of their adherents. The religions studied are Hinduism, Buddhism, Judaism, Christianity and Islam. In each case, we explore the distinctive religious customs and rules, which shape the activity of believers in such areas as worship, dress, diet, marriage and family, work and recreation, birth and death. A major focus of the course is the social relevance of religion in today's society. Its aim is to deepen the student's appreciation of the rich mosaic, which characterises the practical and legal dimensions of the world's great religions.

GENL1060

Moral and Legal Foundations of Human Rights

Faculty of Law
UOC3 HPW2

Moral and Legal Foundations of Human Rights will examine the philosophical and religious origins of the contemporary human rights discourse, and the development of national and international human rights instruments. The course will evaluate the effectiveness of historical and contemporary approaches to human rights protection. The course will critique the Western bias of current human rights language, and explore the notion of rights in non-Western religions and societies.

Topics covered include the moral and religious foundations of human rights; the development of historical and contemporary human rights documents; the notion of rights in relation to universalism, cultural relativism, pluralism and multiculturalism; the effectiveness of current human rights protection; the problems of language in the current human rights discourse, and alternatives.

GENL1061

Religion and Terror

Faculty of Law
UOC3 HPW2

Religion and Terror examines the link between religion and terrorism which can be found in the rhetoric of some world leaders, and in the popular media. It assesses the reality of the link, and the reasons it is made. It will do so from two interrelated perspectives: ideology (general) and the nature of religious conviction (individual). The course will investigate the history of religion and terror; examine the issue of motivation and justification for the use of terror in religious conflicts; and explore the relationship between religious conviction and behaviour. It will evaluate the effectiveness of the rhetorical use of religion in armed conflict.

GENL2020

An Introduction to the Australian Legal System

Faculty of Law
UOC3 HPW2

This course provides a basic understanding of the Australian legal system. It deals with the principal institutions of the legal system, particularly the courts; the legislature and the executive arms of government; the judiciary; the legal profession; the doctrine of precedent; sources of Australian law including the past and present status of Aboriginal customary laws; the origins of common law; the colonisation of Australia; classifications within the common law; the jurisdictions of Australian courts and consideration of alternative methods of dispute resolution.

Assessment: Class participation and take-home exam.

GENL2031

Cyberspace Law

Faculty of Law
UOC3 HPW2

This course surveys how cyberspace (the social space created by computing networks such as the Internet) is being regulated by law and other means, and examines how successful is this regulation. The course takes an Australian perspective, but with a strong emphasis on the development of international regulatory mechanisms. Responses to problems by technical controls will be compared with legal controls. As a survey course, the precise topics to be covered will change from year to year but may include topics such as: theories of cyberspace regulation; governance structures of the Internet - the ICANN example; domain names, identities and reputations; encryption and public key infrastructure (PKI); copyright - can copying be controlled by cyberspace?; content control through censorship and defamation; computer crime and investigation; privacy and surveillance; e-commerce, contracts and consumer rights; and jurisdictional problems and borderless transactions. There will be a team teaching approach with a number of lecturers.

GENL5020

Business Fundamentals

Faculty of Law
UOC3 HPW2

This course introduces students to the fundamentals of business law. The course provides an overview of the interrelationship of laws governing business in Australia and critically evaluates those laws.

Contracts are entered into every day. Most of you will become professionals subjects to a duty of care towards your clients. You are also consumers who have the benefit of certain rights afforded by the Trade Practices Act. As entrepreneurs, professionals and/or employees you are also entitled to the benefit of intellectual property protection for your creative or inventive effort or for the good you will have acquired individually or through your business. The aim of the course is to empower students in everyday situations through the study of the law of contract, negligence, defamation, trade practices law and the law of intellectual property such as copyright, patents and trademarks.

Assessment: Take home or 2 hour examination (in last lecture) 60%; class participation/project, team and individual problems 40%.

GENL5030

Understanding Tax

Board of Studies in Taxation
UOC3 HPW2

Exclusion: enrolment in program 3502, 3543, 3979, 3571 or 3971

Understanding Tax is for students who want a non-technical, practical introduction to our tax system. Whatever career or lifestyle you're contemplating, tax will be an important consideration in decisions you make -- whether it's about buying or renting accommodation, amounts that have to be disclosed to the Tax Office, expenses that can be claimed as deductions, how to fill out a tax return, investing in shares, how much tax you have to pay, whether there are acceptable ways of minimising your tax liability, and what you can do if you're unhappy about a Tax Office decision. The course will be taught in two-hour classes made up of a lecture followed by discussions and practical exercises.

GENM0123

Children - Growing Up in Society

School of Women's and Children's Health
UOC3 HPW2

An introduction to normal growth and development in children and to their interactions with society. Topics include children and the media (advertising and violence), children and sport, childhood accidents, status of children in different cultures, poverty and childhealth, exploitation of children, behaviour disorders, nutrition, adolescence. In short, how can we ensure that children have an optimal relationship with society?

GENM0201**Human Origins, Human Problems**

School of Medical Sciences

UOC3 HPW3

Excluded ANAT2600, ANAT2610

We will be considering what studies of primate behaviour tell us about the behaviour of ancient and modern humans and looking for the origins of some modern human problems (warfare, child abuse and infanticide) in our primate heritage. The course will examine the neurological and structural basis of language and speech and look at how the human brain and hand have become adapted for tool use. Other issues to be examined include the origins and structural adaptations involved in upright walking, problems of human childbirth, hominid reproductive strategies, modern human variation, human prehistory in Australasia and the human face as a means of communication and recognition. The course involves both lecture and laboratory class sessions. The latter will use models and anatomical material to illustrate important aspects of human evolution.

Course dates: Summer 20th - 24th February, Winter 10th - 14th July

GENM0202**Frontiers in Brain Research**

School of Medical Sciences

UOC3 HPW3

Excluded: ANAT3411.

We take for granted the notion that the human brain is the seat of our consciousness and yet very much remains to be learned about how the living brain actually works. Brain disease and mental illness are some of the most important health problems in our community and yet the causes of many of these diseases remain unknown. This course will allow the student to explore the current state of knowledge on the structure and function of the human brain and to learn about current thinking concerning the causes of brain-related illness. Topics include: cellular architecture of the brain; structural and functional differences between the left and right brain hemispheres; developmental abnormalities of the brain; language and the brain; fear and anxiety and the brain; the addicted brain; spinal cord injury and hopes for repair; degenerative brain disease; gender in brain structure and function; and mad cow disease. Students will also have the opportunity to consider ethical issues associated with the treatment of brain diseases (e.g. fetal nerve tissue transplantation in the treatment of degenerative brain disease) in the course of the lecture and laboratory sessions.

Course dates: Winter 17th - 21st July.

GENM0510**Using the Media: Promotion Through Mass Media and Multi Media**

School of Public Health and Community Medicine

UOC3

This is an intensive course in the understanding of mass media and ways of dealing with it and using it to advantage. An introductory analysis of mass media is followed by instruction and training in preparation of material for dissemination in mass media. The course material is supplemented by lectures from outside experts who are engaged in media liaison in TV, print and radio on a regular basis. An optional segment deals with the use of the internet as a mass medium. Tutorials are led by students themselves. All participants are encouraged to express their thoughts and opinions about media and also to interact with other students, who are drawn from a wide variety of faculties in the University. Assessment is based on a journal and a media project which are handed in a month after the classes are complete.

GENM0512**(Mis)representation of Health**

School of Public Health and Community Medicine

UOC3 HPW2

Students will examine how health issues pertaining to, for example, medicine, nursing, hospitals, the environment, death and dying, surrogacy and new technologies, are presented in the print media, television news, documentaries, web sites, soaps and fiction films. Having critically appraised the prerogatives of the media, students will examine the institutional and discursive imperatives under which the media operate in its various forms (print and electronic, mass and new). Against this background we examine how these imperatives may lead a particular form of the media to down play complexity and over-simplify, trivialise, and or sensationalise issues to the detriment of informed public debate. The consequences of these limitations will be related to the ways in which we think about and debate health and illness in the public sphere.

This subject will develop knowledge and skills in:

- explaining how health care is represented in news items, documentaries, web sites, films, soaps, dramas, with specific focus on their 'politics of representation';
- situating representations about health care in a historical and socio-cultural perspective;
- assessing how the prerogatives and established practices of the media institutions which produce the representations in question for the appearance of what is produced;
- addressing health care's tragic choices and wicked problems and the moral, practical and political complexities which constitute them.

GENM0518**Health and Power in an Internet Age**

School of Public Health and Community Medicine

UOC3 HPW2

Australia spends \$60 billion a year on health care and its average health indicators are among the best of any country in the world. None the less, some Australians are much less healthy than others. In exploring the question of why this is so, the course examines concepts of power and wealth in society and how the distribution of power and wealth in society is reflected in the health of different social classes and ethnic groups. It also traces how modern understandings of health are moving towards a more wholistic model, the challenge of alternative models of health, how the internet is bringing about changes in power relationships in the health fields and explores controversies over childbirth.

GENM0701**Contemporary Bioethics**

School of Public Health and Community Medicine

UOC3

Bioethics is the process of reflecting on health issues and moral implications, in individual and social contexts. The course concentrates on contemporary dilemmas which are common in health care. Consumer and professional perspectives on the dilemma are presented, and students are encouraged to use ethical frameworks as tools in the development of an argument. Topics for discussion include: the development of bioethics for health professions and consumers; health care information and privacy and confidentiality; safety and autonomy for patients and carers; resources and justice; life decisions; research and health care and advisory bodies.

GENM0703**Concepts of Physical Fitness and Health**

School of Public Health and Community Medicine

UOC3 HPW2

The students will be exposed to theory and concepts relating to the development and maintenance of physical fitness and general health. Components will include aerobic fitness and conditioning, resistance training, flexibility training, and appropriate nutritional practices. Lifestyle management issues (exercise, smoking, obesity etc) will be discussed with benefits and consequences of those actions used to direct decision making. Popular misconceptions will be addressed during the course of the subject, with research findings used to dispel these myths.

GENR0003**Spirit, Myth and Sacredness in Architecture**

Interior Architecture Program

UOC3 HPW2

The aim of the course is to investigate the sources from which architecture and design have extracted meaning throughout history. The specific focus of the lecture series will be the interrelationship between myth, religion, philosophy and architecture. Case studies demonstrating symbolic traditions will be drawn from both Eastern and Western design, including examples as diverse as the Greek Temple, the Jewish synagogue, the Christian church and the Chinese palace complex. The diversity of subjects and themes will highlight the complexity and sophistication characterising design traditions of the past, and reveal the intricate role architecture has played in the expression of a society's belief systems.

GENR0006**The City: Sydney**

Landscape Architecture Program

UOC3 HPW2

The city is the habitat of modern society. While architects make substantial contributions to the form of the city, they have relatively little influence

over the success or failure of cities. There are much stronger forces at work than architecture. Buildings make the best contribution to the human habitat when they support the patterns and systems of life in the city. By providing an introduction to those patterns and systems, this subject gives students a basis for making buildings work with the city rather than against; Sydney is used as the example. Each lecture is given by an authority in the topic.

GENR0008

History, Theory and Interpretation: Art and Architecture

Architecture Program

UOC3

This course aims to deepen an understanding of basic theoretical concepts in the history of art and design; to gain familiarity with some key writings by artists, art historians and art critics; to develop strategies for evaluating theoretical arguments against appropriate visual works; and to develop competence and confidence in evaluating works of art/design and interpretive strategies developed for our understanding of them. Key concepts to be investigated are: style, 'connoisseurship', formalism, iconography, sociological perspectives, semiotics, gender, sexuality, cultural studies, modernity and post modernity. The subject has been developed around a seminar structure which will encourage students to learn through looking, reading, thinking and informed arguing. All students will be required to purchase a reader.

GENR0012

Great Buildings of the World

Interior Architecture Program

UOC3 HPW2

The aim is to acquaint students with a dozen or more great buildings which were supreme achievements of their time and a timeless contribution to the cultural heritage of the human race. These span from antiquity to the present day, and across different cultures and spiritual traditions. A single building will be presented in each lecture, within its physical, mental and spiritual context; and seminar discussions will debate the symbolic significance of the building and its lasting influence on civilisation. Buildings will include the Acropolis, the Pantheon, the Alhambra, the Forbidden City, the Temple of Ise, the Dome of the Rock, the Crystal Palace, the Pyramid of Cheops, Borobudur, Falling Waters, and the Sydney Opera House.

GENR0015

City Planning Today

Planning and Urban Development

UOC3 HPW2

Excluded: Program 3360.

The way our cities look and operate, their cultural and community life are all considered by town planners. The course deals with the fundamentals of urban planning: its language; its rules and regulations; its controversial nature and the way it operates in practice. It looks at how and why urban planning came into being; how the legal and administrative system works; how the political system operates; and how planners deal with issues - from designing the city to balancing the many conflicts which arise over development projects. Lectures are given by staff of the Faculty of the Built Environment as well as planning practitioners. This course will give you the skills, the understanding and the enthusiasm to play an active role in shaping your city!

GENR0017

Principles and Philosophy of Design

Interior Architecture Program

UOC3 HPW2

The currently popular pseudo-elitist view of art and design is rejected in favour of the proposition that the artist is not a special kind of person but that every person is a special kind of artist. Design is not something which is practiced by the elite few who call themselves designers but by all of us all of the time. This course looks closely at the principles which underpin design in its broadest meaning and application, from the most simple, seemingly intuitive to the most complex of decision-making processes. These principles are studied within a philosophical framework strongly linked to the 'perennial philosophy' which may be found in all cultures and at all times and which has been particularly championed in our age by such writers as A.K. Coomaraswamy, Frithjof Schuon and Rene Guenon, and based heavily upon the work of the late Visiting Professor Peter Kollar.

GENR0019

Critical Perspectives on Twentieth Century Art and Design

Architecture Program

UOC3 HPW2

This course is designed to introduce students to some of the key interpretive strategies used in art history and cultural studies over the last hundred years, with an emphasis on current lively debates. The lectures will explore and question some of the layers of interpretation of artists' works from the time they were made to the present. European, north American and Australian art and design will be examined through various filters such as modernism, postmodernism, internationalism, nationalism, regionalism, gender and identity.

In visual and cultural studies there is no single correct interpretation of a particular art work or movement. This course has been designed to enable you to become aware of the plurality of interpretations and to appreciate (if not always endorse or adopt) the arguments for contesting interpretations of objects and events.

GENR0027

Photography, Society, and the Built Environment

Faculty of the Built Environment

UOC3 HPW3

This elective will give students an individual opportunity to use a camera as a visual research tool in the exploration of society and the built environment. The course involves theory and practice. A series of lectures covering different aspects of social documentary: a brief history of this genre, photojournalism, the photo-essay, street photography, oral history, the family album; and an introduction to some contemporary photographers detailing the urban environment through pattern or landscape. In Photography there is an intimate link between the image and the original. Light acting on and transforming emulsion still seems magical, or thousands of pixels transferred digitally to catch a moment in time is extraordinary. The ability to freeze frame movement in space, hold still light in time, document our communities today for tomorrow, record our visual reality is a powerful tool. With this power comes certain responsibility.

GENS0450

Measuring up the Universe

Faculty of Science

UOC3 HPW2

Microscopes, telescopes, sextants, chronometers, computers, scales and the standard meter. Scientific instruments of the past influenced the evolution of all areas of science and many aspects of daily life. This course looks at topics ranging from Galileo's telescope to the development of barometers. Lectures are supplemented by the examination of items in a historical collection in the Faculty of Science and by visits to museums. The course is 'hands-on' with short written assignments and frequent feed-back in place of exams. Students will learn techniques for studying the history of science and technology and their impact on cultural and economic development both internationally and in Australia.

GENS0501

The Marine Environment

School of Mathematics

UOC6 HPW4

Excluded: GENS4625, MSC12001, GENB5001 Not available to students in Science Programs

This course covers aspects of both the physical and biological environment of the sea and their inter-relationships. It depicts marine science as a body of knowledge and a process of continual enquiry and testing of ideas. It considers human impacts on the marine environments and how the principles and methods of science in general are used to predict and to solve the problems created by human activities. This course includes discussion of: i) the marine environment, its physical, geological, chemical and biological characteristics and their interactions; ii) the sea as a source of human food. Attention is given to aspects of marine productivity, fisheries and mariculture and how science can assist in management for a sustainable yield; and iii) the effects of development, especially industrial development on the marine environment and how science can contribute to providing solutions to these problems created by development. Throughout the course emphasis is placed on case studies. Field excursions are used to supplement the lectures and to encourage further discussion of the problems created by human interference in the environment and their possible solutions.

GENS1002

Consumer Chemistry in the Marketplace

School of Chemistry

UOC3 HPW2

Excluded: GENS4625

This course seeks to provide students with an interesting overview of the chemistry which they will encounter in everyday life. Emphasis will be placed on the types and functions of chemicals used in some typical consumer products. The subject matter is grouped into areas of application which have a common theme and each will form the topic for a given lecture period.

GENS1004

Science and the Cinema

School of Chemistry
UOC3

Imagine Keanu Reeves, Uma Thurman, Elizabeth Shue or Lisa Simpson as scientists. Well Hollywood has in a series of movies which use real scientific concepts as an integral part of the plot. Often the script writers stretch these concepts beyond the realms of reality to make the movies even more exciting. In this general education course you will view at least six movies which deal with a range of scientific issues (and we don't just mean science fiction here!). You will be given some lectures of the basics of the science involved in a given movie, discuss how faithfully the movies portray the science and look at some of the social and ethical issues related to the science that are explored in the films. There will be an opportunity to debate scientific and ethical issues raised by the movies. Not only that but you will get to meet some of the movies stars currently masquerading as chemists in the School of Chemistry. Movies you will see include Gattica (starring Ethan Hawke, Jude Law and Uma Thurman), The Saint (with Val Kilmer and Elizabeth Shue), Chain Reaction (Keanu Reeves and Rachel Weisz), Jurassic Park (Sam Neill, Jeff Goldblum and Laura Dern), an old classic Man in a White Suit (starring Sir Alec Guinness) and more. So come along, see some movies and you might learn some basic stuff about how to make your own genetically modified organism, alternative sources of energy and how science could save the world if only the world wanted saving.

GENS2002

Mathematics in Art and Architecture

School of Mathematics
UOC3 HPW2

There will be alternating Art and Architecture lectures/tutorials and Mathematics lectures/tutorials. The Art and Architecture lectures will present the appearance and/or major influence of mathematical concepts in art and architecture, and the following mathematics lectures will illuminate these concepts. The mathematical content will be: Surfaces, Platonic solids, conics, rotational, developable and minimal surfaces, topology; Symmetry, space filling; projective geometry, perspective; ratios, proportions, spirals; fractals, chaos theory; the computer in art. The mathematics tutorials will discuss problems and exercises in the conventional manner, while the art and architecture tutorials will involve students in discussion of visual material. If possible, there will be visits to museums and galleries.

Assumed knowledge: This course assumes a mathematical knowledge equivalent to that of the NSW School Certificate. In particular, students will be expected to do simple manipulations of algebraic expressions (including substituting values for the variables) and be familiar with the concept of graphing of curves.

Note: This course only runs in Summer and/or Winter sessions.

GENS2005

History of Mathematics

School of Mathematics
UOC3 HPW2

Prerequisite: Any Level 1 Mathematics course or ECON1202 or ECON1203; Excluded: MATH3560.

Classifications of mathematics, ancient and modern; Counting, navigation and measurement in pre-literate societies; Babylonian mathematics on calculating lengths and areas; The 'Greek miracle': round earth, logic, Pythagoras' 'All is number'; Hippocrates of Chios on areas of lunes; proof; Euclid on axioms, on idea of deductive structure; Ptolemy's geocentric astronomy; Ancient Chinese simultaneous linear equations; 16th C solution of cubic equations; Copernicus' heliocentric astronomy; 17th C mathematical laws: Galileo, Kepler, Snell, Hooke, Boyle; development of calculus: Topology: Euler on the bridges of Konigsberg; Statistical inference, 'average man', Galton and correlation; Abstract set theory; Formal (symbolic) logic in 19-20th C, and its role in computing software; Operations research, e.g., stock-cutting and hunting submarines; Chaos, fractals and self-organisation; Social context of mathematics.

GENS3501

Metals, Ceramics, Plastics - Building the Twenty First Century

School of Materials Science and Engineering
UOC3 HPW2

This course is designed to introduce students with a non-technical background to the science of advanced materials, with particular emphasis on how they function and where they are used.

The following topics are included: Surfaces are not superficial; Zeolites: crystals with holes; New forms of carbon: buckyballs, nanotubes and buckycondoms; Conductors and superconductors; Polymers: how to make them and what they can do; Synthesis of materials; Hot metal: its production and use; Making metals strong: the tricks of the blacksmith exposed; Why steel rusts but gold does not; Solar cells, lasers and transistors: how they work; Composites: making plastics strong; Ceramics: from earthenware to space; Smart materials.

Consideration of these materials includes examination of how they have impacted on and contributed to society over the last 100 years, and how they may help shape social and technological development in the future.

Note: 28 hrs/week lecture/tutorials. Offered over 5 days on a full-time basis in the summer recess, 13-17 February 2006. Includes field trip to Powerhouse museum.

GENS3502

Materials in Sport

School of Materials Science and Engineering
UOC3 HPW2
Excluded: MATS1111, MATS1002.

This course explores the application of materials in sporting and leisure pursuits. The role of advanced materials in enhancing performance in sports such as cycling, golf, surfing, skiing and rowing is examined. The conflict between materials development and sporting tradition in sports such as cricket and baseball is studied. We also investigate the role of nanotechnology in improving performance in tennis.

Course outline: materials properties and type; case study of materials in cycling; biomechanics and footwear; materials for golf clubs and cricket bats; nanotechnology and tennis; materials fabrication and surfing; materials and watersports; winter sports and advanced composites.

The course includes laboratory classes and a number of guest lectures.

Note: The course is not available to program 3135 and 3138, nor to students in programs for which courses MATS1111 or MATS1002 are prescribed.

GENS4001

Astronomy

School of Physics
UOC3 HPW2
Excluded: PHYS2160, PHYS3160

The course provides a general overview of astronomy, issues important to this area of science and its role in understanding our place in the cosmos. The following areas will be covered: the solar system and its exploration; stars and their life histories; extragalactic astronomy. Two night time observing sessions are included in the full-session courses, to introduce students to the techniques of astronomical observation and measurement.

GENS4003

Cosmology

School of Physics
UOC3 HPW2
Excluded: PHYS2160, PHYS3160

The course examines the development of cosmology from early times to the present day, its influence on scientific thinking, and how advances in science and technology have furthered its understanding. The issues confronting cosmology as a modern science are also explored.

GENS4008

Nuclear Arms and the New World Order

School of Physics
UOC3 HPW2

Students are invited to study and discuss various questions concerning nuclear weapons. We look at the international political system, warfare and the arms race. We ask how a nuclear bomb actually works, and what are its effects. We study nuclear strategies, and review attempts to control nuclear arms. Finally, we discuss mechanisms of collective security which may eventually remove the threat of nuclear arms entirely: the European Union, the United Nations, and the 'New World Order'.

GENS4010**Science and Religion**

School of Physics
UOC3 HPW2

In many people's minds there is a conflict between religious faith and scientific knowledge. Some of these supposed areas of conflict will be explored, including creation, miracles and suffering, mind and consciousness, and modern environmental and bioethical problems. A mainly Judaeo-Christian perspective will be used but references to other teachings (Buddhist, Taoist, Islamic etc.) will be included.

Note: This course will be taught via web delivery.

GENS4011**Science of Music**

School of Physics
UOC3 HPW2

Why are some sounds harmonious? How do musical instruments work? How do we hear and comprehend music? How and why does music work? The science of music addresses these and other questions in lectures and in experimental sessions. The science of music is one of the oldest experimental sciences and has been a paradigm for science for much of our history. By looking at developments in the science of music in particular, this course also gives an introduction to the history and nature of science in general, and the way in which it interacts with other aspects of culture and society.

GENS4014**Are We Alone? The Search for Life Elsewhere in the Universe**

School of Physics
UOC3 HPW2
Excluded: PHYS2170

A free-ranging review of all aspects of the mind-boggling question: "Are we alone?". The material will include discussions on the origin and survival of life, current hi-tech searches for radio signals from extra-terrestrials, discoveries of new planetary systems, possible types of life-forms, Einstein's relativity, space-travel, and much more. A team of researchers will present lectures, and often disagree with each other. The controversies and the science behind the disputes will be clearly presented.

GENS4015**Brave New World: Science Fiction, Science Fact and the Future**

School of Physics
UOC3

This wholly Internet-delivered course aims to give a big picture overview of the physical sciences at the dawn of the 21st century and beyond. The most common interface between the general public and science is often through science fiction; hence, science fiction is used as a teaching aid to stimulate student interest and as a starting point from which to communicate the science, and its likely future development. This course also examines the interaction between science and society, encouraging students to consider how culture influences science and vice versa.

The areas covered are: the physics of space and time; astronomy; space travel and exploration; astrobiology: life in the Universe; computers & robotics, artificial intelligence & human intelligence; the future of the human race.

GENS5001**Flight and Civilisation**

Department of Aviation
UOC3 HPW2

Aviation has had a tremendous influence on the development of the world in the Twentieth Century. It has significantly reduced transport times and opened new markets for both business and pleasure. The course explores the development of aviation from the first flight up to the present day and into the future. It considers the many components of the industry ranging from the principles of flight, aerodynamics and design to the importance of flight safety and air traffic control. The importance of aviation as a means of transportation, communication and employment are examined from technological, economic, social and environmental perspectives. A field excursion is used to supplement the lectures by examining aircraft at an operating airport and in the Department of Aviation flight simulator at Bankstown.

GENS5002**Aviation: Contemporary Issues in a Complex Socotechnical System**

Department of Aviation
UOC3

Aviation is a high-profile industry that influences modern society at many levels. The aviation system comprises a complex array of human and mechanical interactions - known as a sociotechnical system - providing a myriad of social and technical challenges. Additionally, many seemingly unrelated industries and groups are influenced by aviation.

This course provides the opportunity for students to challenge industry dogmas and consider solutions to the problems facing contemporary aviation. By utilising the variety of skills and backgrounds that General Studies courses bring together, students develop an understanding of the main issues in complex, highly reliable mass-transport systems.

The course also allows students to investigate how the key issues interrelate both within the industry and with entities external to aviation; this course does not simply focus on problems for the industry, but collates the issues that affect the providers, users and third parties involved in the system.

The course is built on four major areas: competition, capacity, safety and the future.

GENS6011**The Consumers Guide to DNA**

School of Biotechnology and Biomolecular Science
UOC3 HPW2
Excluded: BIOC2201, BIOC2291, GENB1001

DNA is the genetic information store of almost all organisms. Rapid advances in DNA technology have led to the discovery of new genes, the deliberate transfer of DNA between different organisms, the cloning of whole animals, genetic engineering of new species and the creation of new pharmaceuticals. Many of the fruits of these developments are now or will soon be available to the general public. Medicine is coming to rely more on DNA analysis for genetic testing and gene therapy. Techniques of DNA manipulation have led to a better understanding of diseases like AIDS and cancer. The Human Genome Project has yielded a new view of human biology. The social, ethical and legal ramifications of these technologies are immense - we will all need to make informed decisions about these issues. This course will explore DNA-based technologies and their products with the aim of creating a deeper understanding of their implications for individuals and society.

GENS6012**Diet-Food, Fact, Fiction and Fallacy**

School of Biotechnology and Biomolecular Science
UOC3

Excluded: BIOC2101, BIOC2181, BIOC2312, BIOC2372, GENB1002, BIOC1221, BIOD1319, BIOD1320, MFAC1501, MFAC1508.

This course aims to consider the human diet and to discuss popular opinions and misconceptions about diet, and why many of these are scientifically incorrect.

The course will summarise how fat, carbohydrate and protein provide metabolic energy and how metabolic fuels are stored in the body. This information provides the basis for discussing how the body adapts to starvation, how the body's fuels are used during exercise and whether 'diets' are useful for losing weight.

The function of vitamins and micronutrients are described and megadoses of vitamins discussed from the perspectives that 'if some is good, is more better?' and 'can vitamins be toxic?'.

The course will cover a selection of topics relevant to Australian contemporary society, including obesity and weight loss, the significance of dietary cholesterol in relation to heart disease, the debate over saturated and polyunsaturated fats, diabetes, fad diets and other food fallacies, glycogen-loading for athletes and fun runners, and some common metabolic diseases.

Note: X2 = web mode and approximately 6 mornings of lectures and tutorials in July.

GENS6013**Plants & People: Murder, Magic, Medicine**

School of Biotechnology and Biomolecular Science
UOC3 HPW2
Excluded: GENB1003

For a very long time mankind has used plant extracts for a wide variety of purposes. Our ancestors found these extracts efficient as medicines, poisons, narcotics, hallucinogens or stimulants. Their experimentation has led to the development of many compounds still used in the food, cosmetic and pharmaceutical industries. Many plant species remain undiscovered or poorly characterised, and much native folk medicine has yet to be fully investigated. This course will explore primarily the

relationship between human culture, the folk use of plant extracts and the development of modern drugs. More recent issues such as the value and use of genetically engineered plants will also be covered. There will be a Saturday field trip to the Royal Botanic Gardens, Sydney.

GENS6014

Genes and Society

School of Biotechnology and Biomolecular Science

UOC3 HPW2

Excluded: GENB1004

This course provides an introduction to the molecular studies of genes in humans as they relate to health, ill-health and behaviour as well as an overview of the scope and direction of gene manipulation and the Human Genome Project, together with their supporting technologies. The consequences of all this are the ethical and moral dilemmas, and challenges that society has to deal with, these including the confidentiality of genetic tests, use of such tests in the workforce and the insurance industry, DNA database for criminal investigation, the justification of a genetic defect for terminating a pregnancy, the patenting of our genes, improving the human gene pool, gene therapy, designer babies, cloning humans (?), who makes the decisions, etc.

GENS6033

HIV and Other Unconquered Infections

School of Biotechnology and Biomolecular Science

UOC3

Excluded: GENS6033, GENB3003

This course, delivered via the web, examines some of the great microbiological challenges that face us today, and their social and economic ramifications. An important focus of the course is the Human Immunodeficiency Virus, but it also considers conditions as diverse as Mad Cow Disease, Ebola haemorrhagic fever, and Hepatitis C. It seeks to explain how, for example, HIV infection is detected, how the HIV virus destroys the immune system, and the social and financial implications of the HIV pandemic world-wide. Students are also introduced to the general nature of antibiotics, and to the challenge of emerging antibiotic resistance. All modules within the course address both the scientific and social aspects of the diseases under discussion. The course builds upon the General Education Course "Great Epidemics in History", however, each course can be taken independently. No prior knowledge of biology is assumed. Tutorials, films and other web-based activities will provide many opportunities for students to explore the controversies relating to HIV policy, use of antibiotics, and management of emerging diseases.

Note: Distance (web) mode

GENS6071

Technological, Social and Business Aspects of Alcohol

School of Biotechnology and Biomolecular Science

UOC3

Excluded: GENB7001

Consumption of alcoholic beverages has been part of human activity for thousands of years. This course aims to look at various aspects of these products, including an historical and current perspective. The science, technology and commercial aspects of the manufacture of beer, wine and spirits will be emphasised. The quality attributes of flavour, aroma and appearance of alcoholic beverages will be investigated. The impacts of alcohol on human health and society will be considered. The course involves some practical work. A number of lecturers from industry and affiliated research centres contribute to this course.

Note: Four full days of lectures/practicals in Summer Session (X1). **Note:** Final assessment marks won't be available until May. Students wishing to do a summer session course to graduate in April or May, please do not enrol in this course.

GENS7201

Australian Wildlife Biology

School of Biological, Earth and Environmental Sciences

UOC6 HPW3

Excluded: BIOS1101, BIOS1201, BIOS1401, LAND1151, GENB2001
Not available to students enrolled in Science Programs

The conservation of natural ecosystems is a topic of immense social significance. This is particularly true in Australia, since not only our animals and plants are unique, having evolved for millions of years in isolation from life on other continents, but our ecosystems are considered some of the most fragile on earth. In this course the broad spectrum of the Australian flora and fauna is explored via lectures and hands-on experience in practical classes and a weekend excursion. As well as

providing a basic grounding in Australian biodiversity, the factors that have shaped it are examined, as well as the challenges faced in its future survival. The influence of people, both indigenous and newly-arrived, is also considered, especially in regard to conservation problems that are of current interest either because of their inherent ecological significance or because they exist within a complex social framework. The knowledge gained in this course will help you to make intelligent and useful contributions to the discussion of a wide range of ecological issues.

Note: There will be a one weekend excursion to the UNSW field station at Smith Lake near Seal Rocks, on the Central Coast (Friday night to Sunday afternoon). Some personal expense will be incurred.

GENS7602

Viewing the Earth Through a Geological Window

School of Biological, Earth and Environmental Sciences

UOC3

Excluded: GEOL1111/GEOS1111, GEOL1211/GEOS1211.

The plate tectonics model. An introduction to resources and the geological processes that control their formation. Application of satellite and airborne imagery in viewing the Earth's surface, environmental assessments and resource discovery. Tutorial sessions on methods of processing satellite imagery and maps. Field excursions examining the influence of geology on landscape and land use. Visit historical mine workings. Four-day short course delivered during July break.

Note: Students will incur some costs associated with field excursion.

GENS7604

Energy Resources for the 21st Century

School of Biological, Earth and Environmental Sciences

UOC3

Excluded: GEOL1111/GEOS1111

This course explores the relative roles of coal, uranium, oil and natural gas as our main energy sources, including current usage patterns and projection of energy needs and resources in the 21st Century. It also covers: a brief history of the international coal, oil and natural gas industries and the organisations involved in their development; the distribution of coal, oil and gas resources in Australia and world-wide, together with their economic, environmental and political significance; alternative sources of energy and improved ways of using conventional energy sources. Four-day short course delivered during July break.

GENS8001

Risk Perception and Reality

School of Safety Science

UOC3

Decisions which affect businesses and the community are often made with a very uncertain knowledge of the future. Decisions are made (or often not made) based on distorted perceptions of risks. This course looks at objective and subjective views of risks that are important to business, the environment, the community and the wider social context. The Australian standard on Risk Management will be reviewed and applied to a number of areas selected by students. The class will consider case studies of major natural and man-made disasters and personal risks and discuss how the risks could have been better managed and how they relate to emergency and contingency planning.

Note: Short course mode only (compulsory 5-day workshop plus assessable tasks completed subsequently).

GENS8002

Sports Performance and Injury Prevention

School of Safety Science

UOC3 HPW2

This course is an introduction to the study of human movement with a focus on sports performance and injury prevention. Lectures will provide the student with a back-ground in anatomy, fundamentals of biomechanics and exercise physiology. Laboratory participation will provide practical experience in methods of performances analysis. There are no mandatory pre-requisites, but a background in science would be helpful to the student.

Note: Assignment and laboratory participation.

GENS8003

Work and Safety

School of Safety Science

UOC3

Workplace injuries and deaths are a great financial and social burden. Work and Safety is a course that explores the interactions between humans, work and safety and the concept of 'duty of care'. It concentrates on identification of workplace hazards, their associated risks to health and how they can be controlled. This is a practical course with great value for future employment as it equips students with fundamental principles of work and safety awareness. It provides tools for students to discharge their legal and social obligations in Occupational Health and Safety. This course is offered by either class attendance or web mode see www.safesci.unsw.edu.au/ge. Students in their final years at University are preferred.

GENS8004**Ergonomics, Productivity and Safety**

School of Safety Science
UOC3

The course is designed to provide students with the basic concepts and principles of ergonomics/ human factors design so that they are able to understand the problems of human-technology interface in the workplace. It looks at the role of ergonomics with reference to the social context, especially in enhancing productivity and safety in the workplace, and emphasises the social role of ergonomics in creating jobs and workplaces that increase workers' safety and satisfaction.

The course discusses topics such as origins and development of ergonomics, fundamentals of ergonomics, socially centered design, human error reduction and safety, environmental ergonomics, human performance analysis, ergonomics and industrial productivity, macro-ergonomics, cost-benefits analysis, ergonomics, OH&S Law, work stress, etc. Case studies from manufacturing, construction, service and other industries are used to demonstrate the role of ergonomics in improving workplace productivity and safety.

The course is available by web mode in all sessions. See www.safesci.unsw.edu.au/ge/

GENS8005**Environmental Management in the Workplace**

School of Safety Science
UOC3

Environmental problems are seen by society as a failure of technology and industry to play their part in prevention. This course explores the full range of environmental problems that occur in industry. Students develop skills to examine and also play an active role in solving these problems. Students gain an appreciation of environmental laws that affect business operations, the concept of 'due diligence', the development of environmental management systems and fundamental principles of best practice, and of meeting new and changing social expectations in managing environmental problems.

The course is available by web mode in all sessions. See www.safesci.unsw.edu.au/ge/

GENS9001**Psychology of the Individual and the Group**

School of Psychology
UOC6 HPW4

Excluded: GENB4001, PSYC1001 Not available to students enrolled in Science Programs

After a brief historical introduction this course will examine the development of humans into distinct individuals who nevertheless function in a social environment. There will be emphasis on the cognitive and social development of the individual through childhood and the development of individual differences in the areas of abilities, personality, attitudes and values will be stressed. Finally, the nature and measurement of the social influences on our behaviour will be considered.

GENS9002**Psychology of the Body and the Mind**

School of Psychology
UOC6 HPW4

Excluded: GENB4002, PSYC1011 Not available to students enrolled in Science Programs

This course will begin with an introduction to the physiological basis of behaviour. The biological approach will continue through consideration of basic questions in perception, conditioning and learning, and motivation and emotion. These will lead to a discussion of abnormal behaviour and of the question of what it is that makes us uniquely human.

GENS9007**The Psychobiology of Sex, Love and Attraction**

School of Psychology
UOC3 HPW2

Excluded: GENB4007, PSYC2001

This course is an introduction to the study of sex, love and attraction in humans and other animals. Although a broad-based perspective is taken throughout the course (using comparative, historical and cross-cultural approaches), evolutionary interpretations are emphasised. The goal of the class is to increase our understanding of the powerful influences sex, love and attraction have on our, and on other animals' lives.

GENS9008**Stereotyping and Prejudice**

School of Psychology
UOC3 HPW2

Excluded: GENB4008, PSYC2001

This course is an introduction to the psychological study of stereotyping and prejudice. The course will consider how stereotypes develop, how they are applied to others and with what consequences, and how they change. The course will also examine the roots of prejudice, and will consider the broad spectrum of what it means to be prejudiced, from unconscious forms to modern day hate groups.

GENS9009**Sport and Exercise Psychology**

School of Psychology
UOC3 HPW2

Excluded: PSYC2001, PSYC2126

This course aims to increase understanding of how psychological factors influence involvement and performance in sport and exercise settings. In addition to being able to identify what general psychological theories and principles are relevant in specific sport and exercise situations, the course provides an overview of contemporary theory, research design, methodology and analytical techniques appropriate to sport and exercise research.

GENT0201**Communication Skills**

School of English
UOC3 HPW2

Excluded: ENGL1004, ENGL2503, ENGL3502 and GENL0220

Examines the factors involved in any communicative event and develops practical skills in effective oral and written communication. Aspects covered include: theoretical models of communication, interpersonal skills, issues of gender and cultural difference, power and solidarity, resolving conflict, oral presentations, writing effectively in a variety of contexts, visual aspects of communication.

GENT0209**Great Books**

School of English
UOC3 HPW2

Excluded: All ENGL courses

Introduces students to a number of texts that have been designated as 'great books' - either because over time they have achieved the status of classics, or because they have won major literary prizes in our own time. Students will read the set books and try to decide what it is that makes a book 'great'. There will also be some discussion of the social, pedagogical and economic mechanisms at work in the making of literary reputations.

GENT0310**Opiate of the People? Religion and Western Society, 1500-2000**

School of History
UOC3 HPW2

Excluded: All HIST courses

Topics to be covered include: the medieval church and the Reformation; religion and culture contact in the New World; the Enlightenment and the emancipation of the Jews; religion in an age of Revolution; the role of religion in USA and Australasia; religion and totalitarianism; postwar and contemporary developments.

GENT0312**Dressed to Kill: Dress and Identity in History**

School of History
UOC3 HPW2

Focuses on the many meanings of dress from daily attire, national dress, and religious costume, to high fashion across a wide gamut of cultures. Specific topics include gender and identity, dress and citizenship, inventing national dress, mass manufacturing, uniforms, haute couture, and issues of tradition and modernity as shown through the human body. The relationships between concealment and etiquette, cloth, holiness and magic, dress and undress, and the manipulation of costume for political agendas will also be explored. Case studies will be taken from world history particularly Europe and Asia from approximately the last four hundred years.

GENT0404

Gods, Heroines and Heroes in Greek Myth and Modern Culture

School of Modern Language Studies

UOC3 HPW2

Excluded: EURO2105

The Greek myths have had a profound and lasting influence on our culture. Partly because the way they comment on the human condition is very adaptable, they continue to be a major source of inspiration to contemporary artists, philosophers, writers and film-makers. An understanding of this influence greatly enhances our appreciation of modern culture. An introduction to the nature of myth, to the creation myths, the stories of the gods and their interaction with humans, and to some of the great cycles - Oedipus, Orpheus, the Trojan War. In order to provide a focus, the myths will be discussed in terms of stories of families and family groups. Reference will be made to contemporary works incorporating new versions of the stories, especially films.

GENT0405

An Introduction to "...Isms": Ideas That Have Shaped Our World

School of Modern Language Studies

UOC3 HPW2

Introduces students to a number of major intellectual and political movements, focussing mainly on the twentieth-century. Such notions as Fascism, Marxism, Existentialism, Surrealism, Feminism and Postmodernism will be considered, with reference to key texts, in order to give students a general understanding of some of the major elements of these movements. Students will be provided with extensive bibliographic information to allow them to pursue any particular interest they may identify.

GENT0413

Introduction to Modern Japan

Department of Japanese & Korean Studies

UOC3 HPW2

Excluded: GENC8003, IBUS2103, JAPN2500, JAPN3500, JAPN3601, JAPN3900

The West has long held a particular fascination for Japan and its people and culture. This fascination arose partly because of Japan's two centuries of self-imposed isolation during the 17th and 18th centuries and following the Meiji Restoration, despite rapid modernisation, and the preservation of many aspects of traditional culture. This course provides an introduction to the language and culture of Japan. Topics include Japan's cultural history, its languages and writing system, Japan's people and geography, traditional arts and aspects of Japanese society including psychological make-up, social stratification and customs.

GENT0414

Korea at a Glance

Department of Japanese & Korean Studies

UOC3 HPW2

Excluded: KORE2500, KORE3900, GENC8002

An introduction to Korean society, history, culture, politics and economy, with an emphasis on the relationship between the economic development and socio-cultural aspects. Topics include societal trends and social stratification, family life and the role of women, demographic change, education and schooling, historical impact, electoral politics and political corruption, interest-group representation, the role of the state, the role of media, economy, business and employment practices, industrial groupings, crime and underworld of Korea, and traditional and modern art forms.

GENT0420

Along the Silk Road: Conquerors, Traders and Explorers

Department of Chinese & Indonesian Studies

UOC3 HPW2

Excluded: CHIN2310

Introduces students to the many cultural influences, which contributed to the formation of the ancient world along the 'Silk Road'. The 'Silk Road' has been the link between the great civilisations of Europe and Asia. Travelled by conquerors, missionaries, traders and explorers, the 'Silk Road' carried ideas, religion, arts, technologies, cuisines and diseases, as well as silk and trade goods of all descriptions.

GENT0421

Chinese Cinema

Department of Chinese & Indonesian Studies

UOC3 HPW2

Excluded: CHIN2302

Since the mid-1980s, films from China have received critical acclaim in many circles and substantial scholarly response, both from within and outside Chinese Studies. Analyses significant feature and documentary films from China, beginning with examples of the cinema of the 1930s and 1940s, and highlights from the cinema of the hard-line Communist period. Examines examples from the ideological thaw in the late 1970s, the New Wave films of the 1980s and several avant-garde films from the 1990s.

GENT0436

Chinese Language for Beginners A

Department of Chinese & Indonesian Studies

UOC3 HPW2

Excluded: All CHIN courses

Introduces Chinese language and culture to beginners and background speakers without any knowledge of Chinese characters. Teaches Mandarin pronunciation through the pinyin script and basic knowledge of Chinese characters.

GENT0437

Chinese Language for Beginners B

Department of Chinese & Indonesian Studies

UOC3 HPW2

Excluded: All CHIN courses

Teaches Chinese language and culture to beginners and background speakers with a limited knowledge of Chinese characters. Teaches Mandarin pronunciation and basic skills in pinyin and character writing.

Note: Students enrolled in Faculty of Arts and Social Sciences degree programs who have completed GENT0436 cannot enrol in this course.

GENT0501

Life-Giving Songs: Music in Australian Aboriginal Society

School of Music and Music Education

UOC3 HPW2

Excluded: All MUSC and MUSI courses, AUST2026

The sonic resources, musical styles and social functions of traditional and popular Australian Aboriginal music; the distribution of musical styles in various parts of the continent; the relationship between music, dance and ceremonies, the anthropologically claimed links between music, social organisation and land occupancy, and the way these musical styles and their encoding of social and ritual structures are articulated in sound recordings and films.

GENT0503

Jazz and Popular Music Studies

School of Music and Music Education

UOC3 HPW2

Excluded: GENP0250, all MUSC and MUSI courses

Provides an opportunity for the formal study and discussion of personalities and elements that have shaped and enriched twentieth century jazz and selected popular musics (with emphasis given to the popular music of the non-western world). Through a chronological study of music trends, students become familiar with the significant innovations of each of the evolutionary stages of each genre. Through application of some of the methods of ethnomusicology and cultural studies, an understanding of the social ecology of each genre will be sought.

GENT0504

Performance and Practice of Music A

School of Music and Music Education

UOC3 HPW2

Excluded: All MUSC and MUSI courses

Designed to enable students to gain experience in performing music, thereby developing the technical, artistic and socially co-operative skills

necessary to perform music as a member of a group. Students will have opportunities to specialise in either choral, wind ensemble, or orchestral performance. Knowledge of repertoire and of the principles of musical interpretation is developed. Content includes critical appraisal of music being studied and activities designed to extend and enrich students' understandings of different genres of music.

GENT0505**Performance and Practice of Music B**

School of Music and Music Education
UOC3 HPW2

Excluded: All MUSC and MUSI courses

As for Performance and Practice of Music A, but with completely different repertoire.

GENT0506**Music Technology**

School of Music and Music Education
UOC3 HPW2

Excluded: All MUSC and MUSI courses

Introduction to the theory and practice of digital sound recordings. Examines issues in psychoacoustics and music composition techniques, as well as developments in electronic and related technologies in making, storing, altering and reproducing music in electronic and digital forms. A variety of softwares will be examined. The practical, lab oriented, focus of the course consists of developing skills and understanding in digital audio and MIDI (Music Instrument Digital Interface) recording and sequencing. Course contents include a project where the student can learn how to create, edit produce and burn their own music CD.

GENT0604**Critical Thinking and Practical Reasoning**

School of Philosophy
UOC3 HPW2

Excluded: All PHIL courses

In this course we investigate thinking, arguing and reasoning, and try to get better at them. Skills in these areas are like any other human skill in that, whatever our level of natural talent may be, developing it is a matter of practice and study. Lectures focus on the sorts of moves and techniques which get used in moral, political, social and academic arguments. We will learn how to understand them, evaluate them, and, where necessary, resist them.

GENT0606**The Use of Language, Images and Symbols**

School of Philosophy
UOC3 HPW2

The leading question we consider: How do language, images and symbols function as a means of communication? Our central concern is with the basis of meaning and we study the way our use of words, symbols and images gives them the meanings they have for us. The conscious use of signs and symbols is compared with the role of symbols in the unconscious and their relation to metaphor and analogy. Our use of language, talking and writing, is often contrasted with real action. We nevertheless can do a lot using language. The following questions will be explored: How do we manage to say what we mean? What is involved in meaning what you say? How do we often succeed in communicating much more than our words mean?

GENT0707**Globalisation and the Nation State**

School of Politics and International Relations
UOC3 HPW2

Excluded: All POLS courses

An interdisciplinary introduction to 'globalisation' and the issues surrounding it. Concentrates on the question of whether or not globalisation is making, or will make, the nation state redundant. Attempts to answer this question by using theories and concepts from economics, history and politics.

GENT0803**Introduction to Australian Cinema**

School of Media, Film and Theatre
UOC3 HPW4

Excluded: GENS4507, SOCA1005, all MDCM and MEFT courses

Provides students with an introduction to the issues that arise in the study of national cinemas. Structured around concepts, such as ideology, mediation, representation and identity, which are exemplified by looking

at different media forms. Investigates the cinema as a cultural industry that does more than merely reflect or report on society.

Note: Contact hours include screening.

GENT0804**Internet and Cyberculture**

School of Media, Film and Theatre
UOC3 HPW2

Excluded: All MDCM and MEFT courses

Introduces critical perspectives on Internet histories, explores the conventions for production and use of online content and applications; examines the industrial and workplace implications of new technologies; and traces changes in political landscapes with new information infrastructures.

GENT0902**Witches, Quacks and Lunatics: A Social History of Health and Illness**

School of History and Philosophy of Science
UOC3 HPW2

Excluded: GENS5522, all HPSC courses, all HPST courses

If you felt sick in the past, who did you consult? The local witch, the alchemist, the seller of pills and potions which claimed to cure everything? Find out why very few people before the 20th century ever consulted a doctor and why, in some times and places, it was probably better not to.

GENT0903**Environmental Conflicts**

School of History and Philosophy of Science
UOC3 HPW2

Excluded: GENS4529, all HPSC courses, all SCTS courses

Explores the social, historical and political aspects of environmental conflicts and 'sustainable development'. These can be understood through the history of environmentalism in the twentieth century, and the study of political and social controversies arising from the push for a 'sustainable' society. Implications at the local, national and international level are examined through specific areas of conflict, for example fossil fuels and the politics of energy, the politicisation of hazardous chemicals, sustainable urban design, and the politics of trees. Uses a 'hands-on' case study approach.

GENT0911**Maniacs, Murderers and Medical Detectives**

School of History and Philosophy of Science
UOC3 HPW2

Excluded: All CRIM courses, SLSP2820

Examines the ways in which many people in the past "got away with murder" and in what ways the detection of crime and the subsequent conviction of criminals have been influenced by developments and discoveries in medical science. Explores these questions using an historical perspective to explain how the public understanding of science and medicine went hand in hand with increasingly sophisticated methods of murder, and hence increasingly efficient methods of scientific detection. Topics include: over-confident poisoners; weapons and wounds; craniometry and the "criminal type"; the 19th century "epidemic" of matrimonial murder; doctors as murderers; science in the courtroom.

GENT1202**Social Aspects of Deviance**

School of Sociology and Anthropology
UOC3

Excluded: SOCA2208 and SOCA3410

Provides a broad overview of current theories of how deviance is maintained or controlled and provides a closer look at some selected aspects of deviance. The sociology of deviance studies the making and breaking of rules in society. Deviance includes both legally proscribed activities such as arson, vandalism, and assault; and socially sanctioned activities, states and phenomena such as rudeness, promiscuity, acne, obesity, stupidity, pollution and pornography. In a changing society, new forms of deviance may emerge (smoking, sexual harassment) and other activities gain social acceptance (e.g. higher education for women, ethnic diversity).

GENT1205**Experiencing Anthropology Through Fieldwork**

School of Sociology and Anthropology
UOC6

Excluded: SOCA2204, SOCI3710, GENT1204

Provides training in and use of ethnographic fieldwork methods in the context of a developing country with an understanding of village vs urban life and how development organisations impact. Ethnography is a part of the methodology of both sociology and anthropology as well as other social science research. Interview techniques and technologies, cultural mapping, methods of recording field data and participatory community development research are amongst the procedures to be explored. Field visits to regional, government and non-government organisations form a part of the research to understand how such institutions impact on village life.

Note: This course will be taught in November-December. Students must contact Grant McCall (G.Mccall@unsw.edu.au) prior to the commencement of Session Two.

GENT1206

Australian Feminist Issues

School of Sociology and Anthropology

UOC3 HPW2

Excluded: ARTS3010

Australian women were among the first in the world to organise to demand the right to vote and to stand for Parliament and have gained major changes in matters affecting the family, religion, employment, property, sexuality, education and health. Sets current demands within the social context of past failures and achievements. Addresses both general concerns and principles of Australian feminism and their application to a sample of specific issues involving personal and public life of women and girls.

GENT1207

Crime, Sex and Gender

School of Sociology and Anthropology

UOC3

Excluded: SOCA3409, WOMS2007, WOMS3006

Examines social implications of the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests. The intersection of criminality and sexuality demonstrates legal limits of public and private in intimate matters of identity, relationship, and pleasure. Provides an overview of major issues and theories, and may also deal with some specific examples such as pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, and underage pregnancy.

GENT1209

Migration and Australian Society

School of Sociology and Anthropology

UOC3

Excluded: SOCA3407, SOCI3614, AUST2011

Examines racial, ethnic and social issues surrounding migration to Australia. Topics may include an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

GENT1301

Contemporary American Film

Media, Film and Theatre

UOC3 HPW4

Excluded: GENS5180, all FILM, MEFT and THFI courses

From the late 1960s to the present day, America has produced powerful independent films that make up the New Hollywood. This course focuses critically on the diverse range of films, filmmakers and genres of contemporary American cinema from 'Easy Rider' to Tarantino. It takes an analytical approach to the study of the formal systems of narrative and filmic style

GENT1401

Biopsychosocial Study of Humour

School of Social Work

UOC3 HPW2

Excluded: GENP0350

Examines humour from a biopsychosocial perspective. The large number of theories on humour from a variety of perspectives are considered, but the course focuses mainly on theories relating humour to health, well-being and coping. The increasing use of humour in health care and related contexts is critically examined. Students study the research literature on the putative effects of humour on physiological arousal, physiological

functioning, immune function, depression, anxiety and coping under stress. In order to understand humour it is necessary to consider individual differences in terms of taste, sense of humour and ability to generate humour. These factors are also considered. Students are required to collect and present humour material, and discuss this in tutorials.

GENT1403

Global Crisis: Transition to a Sustainable Society

School of Social Work

UOC3 HPW2

Excluded: GENS4529

Examines the argument that our industrial-affluent society is not sustainable and that we must face up to fundamental change in coming decades. The first half analyses major global problems such as the environment, resource depletion, Third World poverty and social breakdown, and explains these primarily in terms of the over-consumption by rich countries. Critical attention is given to the present economic system and to the values of consumer society. The second half presents a vision of a sustainable alternative society, based on more simple lifestyles and self-sufficient communities. There will be a short visit to an alternative lifestyle educational site 45 minutes from the city.

GENT1501

Gifted and Talented Students: Recognition and Response

School of Education

UOC3 HPW2

Excluded: EDST1205, EDST2050

Explores the concept of giftedness, beginning with an analysis of its historical and cultural roots and leading through to a focus on different domains and levels of giftedness. Introduces some of the objective and subjective methods of assessing the abilities and achievements of gifted students. Examines cognitive and affective development of gifted students as well as empirical research on optimal contexts for learning for students of high intellectual potential.

GENT1502

Student Learning Thinking and Problem Solving

School of Education

UOC3 HPW3

Excluded: EDST1301, EDST2090

Examines how we reason, think, and solve problems. How should we communicate with people to help them understand and learn? Answers are sought in the context of theories of mental processes.

Note: Runs for 9 weeks only

GENT1503

Introduction to Educational Psychology

School of Education

UOC3 HPW3

Excluded: EDST1101

An introduction to the study of Educational Psychology which examines some aspects of development and of learning and instruction. Topics include: cognitive development; development of memory; the role of knowledge; problem solving and thinking; an introduction to instructional methods.

Note: Runs for 9 weeks only

GENT1507

Learning Process and Instructional Procedures

School of Education

UOC3 HPW2

Excluded: EDST1103, EDST1201, EDST2010

Covers critical areas of classroom instruction and provides a solid grounding in the cognitive psychology of school subjects. Topics include cognitive processes involved in writing, reading, mathematics and science.

GENT1508

Managing Stress and Anxiety

School of Education

UOC3 HPW2

Excluded: EDST1304, EDST2041

Examines the concepts of emotion, stress and anxiety and their effects on physical and mental health. Discusses a range of physiological and psychological aspects, and the impact of the individual's state on performance outcomes. Includes possible stress management procedures.

GENT1512**Personality, Mood and Learning**

School of Education

UOC3 HPW3

Excluded: EDST1452, EDST2052

A study of the nature and measurement of a variety of personality characteristics, moods and attitudes commonly encountered in learning situations and their effect on learning. Relationships between personality and subject preferences and possible subsequent occupations.

Note: Runs for 9 weeks only

GENT1513**Culture, Identity & Education**

School of Education

UOC3 HPW3

Excluded: EDST1207, EDST2070

Examines how the processes of schooling have interacted with issues of identity and diversity. Looks at the historical dynamics of migration and settlement and how their growth has affected the rhetoric of Australian nationalism. How have the issues of race and culture been addressed in our schools? Explores how multiculturalism has influenced educational perceptions at a policy level and examines the interpretations of that policy in the context of the public school classroom.

Note: Runs for 9 weeks only

GENT1520**Motivation in Learning and Teaching**

School of Education

UOC3 HPW3

Excluded: EDST1402, EDST2044

Explores the relationship between power and knowledge in systems of education; its ideological processes and its historical and social context. Many theorists have articulated the role of ideology in schools, school administration and social culture. Studies how and why schools are considered political agents exploring the notions of empowerment, libertarian pedagogy, social and cultural reproduction, social control theory and the dynamics of public policy. Australia, in particular NSW, is used as a case study.

Note: Runs for 9 weeks only.

GENX0101**Indigenous Australia - Travelling Through Time**

Nura Gili (Indigenous Programs)

UOC3 HPW2

Excluded: ATSI2001, ATSI2002, AUST2004, AUST2005, GEND3214

Examines the relationships of Aboriginal people to this place we now call Australia. Moves through the history of Indigenous Australians up until the 1960s. Designed to give a broad general knowledge and understanding of the diversity of Indigenous societies. The impact of colonisation on Aboriginal people and the effects of government policies will be a theme.

GENX0102**Indigenous Australia - From the Present to the Future**

Nura Gili (Indigenous Programs)

UOC3 HPW2

Excluded: ATSI2001, ATSI2002, AUST2004, AUST2005

Focuses on the political and social issues that have impacted on Indigenous Australians. Government policies on citizens' rights, education, employment, health, housing, and connection to land have been central to the changing circumstances of Aboriginal and Torres Strait Islander peoples. These and other major issues from the 1960s to the present will be examined.

GENX0103**Aboriginal Heritage: From Diggings to Display**

Nura Gili (Indigenous Programs)

UOC3 HPW2

Focuses on the role of museums, art galleries and cultural centres in the display and representations of Indigenous peoples and their culture. A critical introduction to heritage of both pre-contact and contact Australia and its relationship to perpetuating myths through display are examined. Disciplines of anthropology, ethnography, archaeology, and museum curatorial studies are examined. Particular attention is given to material culture and the politics of display in museums and keeping places.

Note: Includes museum/gallery visits.

GENX0104**Aboriginal Popular Culture - We Hear the Songs, See the Dance and Live the Culture**

Nura Gili (Indigenous Programs)

UOC3 HPW2

Examines the way in which Australia's popular culture is filled with representations and misrepresentations of Indigenous Australians. Focuses on the role of media, film, photography, newspapers, and other written texts in creating, replicating, reproducing and manufacturing stereotypes which represent and misrepresent Aboriginal identity and culture. Also covers the contemporary expressions of Aboriginal art, music and literature.

Note: Includes a half-day excursion to examine a number of forms of Aboriginal popular culture.

GEOH1601**Australian and Global Geographies: Integration and Divergence**

School of Biological, Earth and Environmental Sciences

UOC6 HPW4

The geography of indigenous and invasion Australia. Patterns and consequences of economic and cultural diffusion and change. Socio-economic impacts of industrial change. Emergence of global information economies, telecommunications networks. Landscapes of production and consumption. Transformations of gender roles and influences of feminism. Changing patterns and impacts of migration. Re-assessments of national identity, multiculturalism, and reconciliation. The global diffusion of popular culture and the reaction in Australia. Impacts of globalisation on material well-being and cultural diversity. Introduction to spatial analysis and GIS with particular emphasis on economic and social patterns and change. Workshops, field trips and skills development for understanding contemporary urbanisation.

GEOH2001**Field Research**

School of Biological, Earth and Environmental Sciences

UOC6 HPW3

Excluded: GEOG2001

An introduction to field research in geography. Usually composed of a four day field trip in the mid-semester break. Field methods and skills in both physical and human geography. Workshops in report writing, critical analysis, and research practice.

GEOH2611**Geographies of the Asia-Pacific**

School of Biological, Earth and Environmental Sciences

UOC6 HPW3

The Geographies of the Asia-Pacific introduces a region that is as diverse as it is vast. This course draws on geography's renewed interest in locality, or context specificity. These 'new location studies' are informed by the 'cultural turn' and link broader structures to processes in local settings. This course aims to encapsulate some of the shared histories, the various experiences of colonisations, and some of the more contemporary consequences, as well as provide details about the uniqueness of context, of places and peoples.

GEOH2641**Australian Urban Environments**

School of Biological, Earth and Environmental Sciences

UOC6 HPW4

This course examines human environments in Australia. Theoretical frameworks include political ecology, economic and poststructuralist geography. The course begins by exploring ideologies of human-nature relations. Urban and natural landscapes, the built environment and planning principles are all considered as cultural constructions - as concepts linked to ideologies of human-nature relations. The course considers environmental impacts of urbanisation, population growth and economic production that stem from different articulations of human-nature relations, and discusses forms of resistance, theories of environmental justice and participatory decision-making that seek to transform human-nature relations. Practical classes include field exercises and introductory Geographical Information Systems (GIS) workshops.

GEOH2801**Geographical Information Systems**

Built Environment Geography

UOC6 HPW4

An introduction to Geographical Information Systems (GIS) and their applications in urban studies, planning, public management, public health, environment planning, and business contexts. A solid understanding of fundamental concepts, principles, and functions of GIS, and of types of spatial data, their entry, analysis and display into a GIS. Overview of technical and institutional issues in GIS development. Teaching will involve lectures and computer laboratories.

GEOH3101

Advanced Geographic Data Analysis

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: GEOG2101 or BIOS2041 or SLSP2001

Applications of multivariate techniques commonly used in geographical enquiry. Explorations of spatial analysis methods and advanced models in a GIS environment. The collection, assembly, analysis and presentation of quantitative and spatial data. Preparation for reading more advanced geographical and statistical literature.

GEOH3111

Advanced Qualitative Method for Geography

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOG3611

Application of interview techniques. Construction of interview guides. Landscape interpretation. The collection, assembly, analysis (NVIVO) and presentation of qualitative data.

GEOH3621

Place, Identity and Difference

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOG3166.

Issues of place, identity, territory and representation. Case studies cover a range of axes of difference including religion, place, gender, sexuality, nationalism and popular culture. Key theories of identity. Creative and official representations of places and of peoples. The deployment and representation of cultural difference.

GEOH3641

Regional Australia: Geographies of uneven development

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Key concepts and theories in regional economic geography. Theories of location and regional development, spatial interaction, uneven development, and structural change. Economic and regional problems in Australia. Field work, workshops and practical skills in regional and spatial analysis. This course is taught as a field school in winter session.

GEOH3651

Geographies of international migration and settlement: remaking nations in the Pacific Rim

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

An international and cross-institutional discussion of the theory and experience of international migration and settlement. Analyses of: immigration policies; international migration patterns; settlement policies; outcomes and experiences; international regimes regulating migration, and; changing global demographics. Case studies of Australia, Canada and Singapore. Mixed tutorial groups (with students from Singapore, Vancouver and Sydney).

GEOH3661

Cities and Urbanism

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Geographers, and others, are interested in urbanism: the ways we live in cities as individuals, and in groups. Cities and Urbanism provides an overview of urban theory, and in particular the concept of 'urbanism'. It considers how urbanism is studied and theorised, over time and in different disciplines. During the quantitative revolution, the study of urbanism declined. It then re-emerged with the 'cultural turn' in human geography and other disciplines and now includes the benefits of, for example, a postcolonial perspective. This course is designed for human geographers, urban sociologists, urban/town planners, architects and anyone interested in theorisations of 'the city'.

GEOH3671

Transport, Land Use and Environment

Built Environment Geography
UOC6 HPW6

Prerequisite: 6 Units of Credit of Level 1 Geography courses or PLAN1011; Excluded: GEOG2071, GEOG3181, AUST2031.

Introduction to the complex interactions between transport, land use, and the environment in urban areas. Special focus on the long term environmental consequences of transport decisions. Introduction to the various methods used to analyse and predict the consequences of policy changes. Australian cities as case studies.

GEOH3911

Environmental Impact Assessment

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Environmental Impact Assessment (EIA) is an important part of environmental decision making throughout the world. This course will provide students with an understanding of: the Commonwealth and NSW legislative framework for EIA; guidelines for EIA; ecologically sustainable development; impact evaluation in terms of environmental and socio-economic criteria; procedures, techniques and issues in EIA; and, future directions. Case studies of environmental impact statements (EIS) from the physical and human environment are used throughout the course. The course is valuable to students interested in environmental management.

GEOH3921

Coastal Resource Management

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

This course focuses on coastal resource assessment and management. Topics include: Australian coastal zone policy, coastal erosion and conservation, soil and water acidification, global shrimp farming issues and management, oyster farming, causes of fish kills and fish disease outbreaks, estuary management, coastal water resource management, recreational and commercial fisheries, and coastal wetlands. The course considers Australian and global perspectives on current and emerging coastal resource management issues. Students will participate in group work to develop skills in resource management.

GEOH4418

Honours Geography

School of Biological, Earth and Environmental Sciences
UOC24 HPW0

A 24 uoc research project in physical geography to be completed within a single session.

Note/s: Plus BEES4511, and 18 UOC from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at Stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of Stages 1-3 of Advanced Science study plans in Geoscience, completion of Stages 1-3 of the Environmental Science degree or a Major in Physical Geography or Earth Environmental Science with a Credit average or better in stage 3 Physical Geography courses.

GEOH4871

Transport Applications of Geographical Information Systems

Built Environment Geography
UOC6 HPW4

Prerequisite: GEOG3671.

Introduction to the concepts and applications of Transport Information Systems (GIS-T). Topics covered include network structures, data structures, transportation related referencing systems. Applications of urban transport planning models, vehicle routing and logistics. Location and allocation analysis.

GEOL4131

Advanced Topics in Applied Geology - A

School of Biological, Earth and Environmental Sciences
UOC12 HPW8

Prerequisite: 24 Units Of Credit Of Level 3 Geology or Physical Geography Courses; Excluded: GEOL4102.

Instruction by lectures, tutorials and assignments in advanced aspects of geological science and its applications. Students will individually select modules and subjects, which may include subjects drawn from

outside the School or Faculty, approved by the School. Modules will cover a number of specialised fields including mineral exploration, mine geology, sedimentary basin studies, geophysics, environmental geology, hydrogeology, data processing methods, as well as fundamental geology topics. Some modules may be delivered at other universities through the Sydney Universities Consortium of Geology and Geophysics.

Note: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4141

Advanced Topics in Applied Geology - B

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: 24 Units Of Credit Of Level 3 Geology or Physical Geography Courses; Excluded: GEOL4102.

Instruction by lectures, tutorials and assignments in advanced aspects of geological science and its applications. Students will individually select modules and subjects, which may include subjects drawn from outside the School or Faculty, approved by the School. Modules will cover a number of specialised fields including mineral exploration, mine geology, sedimentary basin studies, geophysics, environmental geology, hydrogeology, data processing methods, as well as fundamental geology topics. Some modules may be delivered at other universities through the Sydney Universities Consortium of Geology and Geophysics.

Note: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4203

Field Project (Part-Time)

School of Biological, Earth and Environmental Sciences
UOC12 HPW10

A major field and laboratory project spread over two sessions for part-time study, which may include geological mapping and interpretation of other geological data (possibly including satellite imagery, geophysical datasets, geochemical or geohydrological information). The project may involve aspects of resource development, engineering or environmental geology, regional geology and groundwater studies.

Note: Geological field work of up to six weeks duration may be required. Students may incur personal costs.

GEOL4204

Geology Honours Research Project

School of Biological, Earth and Environmental Sciences
UOC24 HPW18

A major field and laboratory project, which may include geological mapping, laboratory experimental work and processing of earth science data (possibly including satellite imagery, geophysical or geochemical datasets, or hydrogeological information). The project may involve aspects of resource development, engineering or environmental geology, regional geology and groundwater studies. The results of the project will be presented in the form of an honours thesis. Projects may receive external support from companies or government agencies.

Geological field work of up to six weeks duration may be required. Students may incur personal costs.

Note: Plus BEES4511, and 18 UOC from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in geoscience or geophysics, completion of stages 1-3 of the applied geology degree or a major in geology or earth environmental science with a credit average or better in stage 3 geology courses.

GEOL4205

Research Project Geology Honours 18uoc

School of Biological, Earth and Environmental Sciences
UOC18

An 18 uoc research project in Geology to be completed within a single session.

Notes: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 geology courses.

Geological field work of up to 6 weeks duration may be required and students may incur personal expense.

GEOL4206

Research Project Geology Honours 12uoc

School of Biological, Earth and Environmental Sciences
UOC12 HPW12

A 12 uoc research project in Geology to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 Geology courses.

Geological field work of up to 6 weeks duration may be required and students may incur personal expense.

GEOL4207

Research Project Geology Honours 6uoc

School of Biological, Earth and Environmental Sciences
UOC6 HPW6

A 6 uoc research project in Geology to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 Geology courses.

GEOS1111

Fundamentals of Geology

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOL5200, GENS7601, GENS7602, GENS7604, GEOL1111

This course provides a sound basis in geology to those wishing to pursue professional careers as geologists, mining and petroleum engineers and environmental earth scientists. It will also be of interest to those who wish to understand more about the nature and origin of earth materials. The fundamental properties of minerals and rocks and the processes by which they form are described. Geological history and structure and consequences for the formation and preservation of mineral, coal and petroleum resources are considered. Methods for the analysis, description and definition of geological materials and resources are provided.

Note: Up to two days field work is required and will involve some cost to students.

GEOS1211

Environmental Earth Science

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GENS7601, GENS7602, GENS7604, GEOL1211

This course takes a modern approach to studying the history of change on planet Earth. The origins of the continents, oceans, atmosphere and the planet itself are considered from a variety of perspectives. The beginnings of life and evolution of selected fauna and flora are investigated from genetic and fossil evidence. The relationships between Earth's geological environments and their associated life forms are explored. The effects of change, both natural and induced by humans, on soil, water and the landscape are examined. The course is delivered by experts from across the range of earth and environmental sciences.

Note: Skills in environmental earth science will be acquired through problem-solving laboratory tutorials and a four day field study camp. The field camp is compulsory and will involve some cost to students.

GEOS1701

Environmental Systems and Processes

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Excluded: GEOG1701, GEOG1721, GEOG1031, GEOG1073, GEOG1711, GEOS1711

An introduction to the role of environmental processes in shaping the patterns of the physical environment and the operation of global environmental systems. Topics include earth, atmosphere and biosphere systems, weather and climate, water resources, soils and land degradation, fluvial and coastal processes and landforms, biodiversity and Australian biotic patterns. A major theme of the course involves the sustainable interaction of humans with their environment and the causes of environmental crises. Instruction is given on practical methods involved in applied geography and environmental sciences including mapping, analysis of aerial photography, field techniques and remote sensing.

Note: Students are required to take part in a one-day field trip and students will incur personal costs. Details will be provided during the first week of the course.

GEOS1711

Planet Earth (Physical Geography for Environmental Engineers)

School of Biological, Earth and Environmental Sciences
UOC6

Excluded: GEOG1711, GEOG1701, GEOS1701

An introduction to the role of environmental processes in shaping the patterns of the physical environment and the operation of global environmental systems. Topics include earth, atmosphere and biosphere systems, weather and climate, water resources, soils and land degradation, fluvial and coastal processes and landforms, biodiversity and Australian biotic patterns. A major theme of the course involves the sustainable interaction of humans with their environment and the causes of environmental crises. Instruction is given on practical methods involved in applied geography and environmental sciences including mapping, analysis of aerial photography, field techniques and remote sensing.

GEOS2071

Life through Time

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOL3121

The course offers an overview of life through time with a focus on Australian prehistory. The nature, functional morphology and evolutionary history of invertebrates, vertebrates and plants are presented in the context of Australia's evolving habitats and climates. Processes and places of fossilisation, evolution, time scales, approaches to assessing relationships and the plate tectonic history of the continent of Australia are important components of this overview of the history of Australia's unique biota. Practical work on the most important groups of fossils is an essential part of the course.

Note: Up to 4 days of fieldwork at selected fossil sites will be part of the course and students will incur some personal costs.

GEOS2171

Earth Structures

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Pre-requisites: GEOL1111/GEOS1111 or GEOL1211/GEOS1211
Exclusions: GEOL2171

Most regions of the Earth's crust have been deformed over many millions of years, resulting in a complex three dimensional form. This course seeks to unravel this history through use of remotely sensed geophysical imagery and field mapping data. This course will demonstrate how large scale regional structures are inferred or measures from surface outcrop mapping.

Note: A four day field mapping camp is an essential part of the course and will involve some cost to students.

GEOS2181

Earth Materials

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Pre-requisites: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 Exclusion: GEOL2181

An introduction to the nature and analysis of minerals, rocks and soils. Atomic structure, composition, properties and classification of minerals, with special reference to the rock-forming minerals and the clay minerals. Mineral analysis techniques including chemical methods and X-ray diffraction; application of isotope studies including an introduction to radiometric dating. Genesis, analysis and classification of igneous, metamorphic and sedimentary rock types; chemical weathering and rock

formation. Optical properties of minerals and rocks under the polarising microscope.

GEOS2291

Ground and Surface Water

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Exclusion: GEOL2291

An introduction to the interaction between water and the surficial environment, and the nature of water resources in Australia. The hydrologic cycle, geological and geomorphological controls on water flow and accumulation. Groundwater chemistry, salinity and contamination; the nature, development and sustainability of Australian groundwater resources. The application of environmental geophysics and drilling methods in groundwater studies and mapping of contaminants, including downhole logging techniques, electrical and seismic methods.

Note: Field work at dryland saline and contaminated sites, and students may incur personal costs..

GEOS2711

Australian Climate and Vegetation

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: GEOG1701; Excluded: GEOG2711.

Contemporary climatic patterns and controls in Australia. Development of the Australian vegetation. Elements of the Australian vegetation and their distribution. Climate change with particular emphasis on the Quaternary. ENSO phenomena and climatic variability in Australia. Fire and vegetation interactions. The impact of European occupation in Australia.

Note: Field-work is an important component of the course and will involve expense to individuals.

GEOS2721

Australian Surface Environments and Landforms

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Prerequisite: GEOS1701; Excluded: GEOG2721.

The study of surface processes and landforms; especially those formed by river systems and coastal environments. The nature of surface deposits, sediments and soils and the interrelationships with landforms in different environmental settings. An emphasis on contemporary processes and factors of landform creation, as well as changes to landforms and surface deposits over time and in response to human modification of the landscape. Field and laboratory based work will provide practical experience in physical landscape evaluation and land management techniques.

Note: Students will incur personal costs associated with a three day field trip to the Kiama/Robertson district on the South Coast. Details will be provided during the first week of the course.

GEOS2811

Remote Sensing Applications and Digital Image Analysis

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Computer based techniques for digital image display, analysis and interpretation including the acquisition and processing of optical, hyperspectral, thermal and radar remotely sensed imagery will be introduced. Laboratory work will use practical techniques including image enhancement, geometric correction, mapping. Classification and data interpretation will be developed with a focus on the use of earth-resource imagery for a wide range of environmental applications including geology, vegetation and forestry, agriculture, oceanographic and regional and urban analysis.

GEOS2821

Geographic Information Systems and Science

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOG2821

There has been a rapid growth in the use of digital spatial data in many areas of resource management and the environmental sciences. The aim of this course is to provide both a solid theoretical understanding and a comprehensive practical introduction to the use of geographic information systems and science in the analysis of digital spatial data, simple modelling using digital spatial data, and in decision support using commercially available software. Topics covered in the course

provide a comprehensive overview of the analytical treatment of digital geographic information including: sources; storage, representation and visualisation; analysis to generate new information and knowledge; and their dissemination through avenues such as the internet.

GEOS3131

Field Methods and Mapping

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Pre-requisites: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 Excluded: GEOL3131

This course provides opportunity to undertake an extended field mapping exercise in a selected area of the state. The course will cover practical geological mapping techniques, general field skills, and the integration of stratigraphic, lithological, structural and palaeontological concepts. Use of remote sensed and geophysical imagery of the area to be mapped will be included. This course may be run in conjunction with other universities.

Note: A field mapping camp, up to 6 days in duration, forms the principal component of the course and students will incur some personal costs.

GEOS3141

Mineral and Energy Resources

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Pre-requisite: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 or GEOL5321 or GEOL5200. Excluded: GEOL3241, GEOL3101, GEOL5300, GEOL3201, GENS7604

The course provides an introduction to the nature and formation of mineral and energy resources. It is designed for those students wishing to work in the future as professional geologists, resource engineers and in other fields of geoscience. It covers: the geological setting, characteristics and genesis of major categories of metallic resources, the nature and origin of coal-bearing sequences and the generation, migration, entrapment and degradation of petroleum. Laboratory study of hand specimens, thin and polished sections is undertaken. Exploration and development methods are described.

Note: Up to four days of fieldwork is a compulsory part of this course for which students will incur personal costs.

GEOS3251

Field Studies: Geological Terrains

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Examination of geological features of selected geological terrains. Course will involve a series of preliminary readings and tutorials, an extended field excursion incorporating geological mapping and terrain evaluation, as well as a major field report. Course may be delivered in cooperation with other universities, government agencies or companies.

Note: Involves geological fieldwork of up to 12 days duration. Students will incur costs.

GEOS3281

Environmental and Contaminant Geochemistry

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOL3281

This course examines the characteristics, source and fate of metals and organic contaminants in natural and urban environments. Primary and secondary dispersion of elements and weather processes. Principles of vapour, water, soil, drainage sediments, rocks and vegetation geochemistry as applied to environmental assessments; aqueous geochemistry and contaminant modelling, with reference to Australian case studies. Introduction to sampling, analytical techniques and design of environmental surveys.

Note: Fieldwork of up to 3 days duration will involve geochemical surveys at a contaminated site and students will incur some personal costs.

Assumed knowledge of level 1 geology, geography or chemistry.

GEOS3300

Mine Geology

School of Biological, Earth and Environmental Sciences
UOC3 HPW4

Prerequisites: GEOL1111/GEOS1111 or GEOL5200 Excluded: GEOL3141, GEOL5300, GENS7601, GENS7602

Taught in Weeks 1 - 10, this course provides an introduction to the nature and formation of mineral deposits and coal resources. It covers

the geological setting, characteristics and genesis of major categories of metallic and non-metallic mineral resources, the nature and origin of coal-bearing sequences and the relevance of geological factors to their extraction and use. There is an introduction to stereographic projection analysis in understanding slope stability. This course includes a laboratory study of hand specimens. Exploration and resource assessment methods are also described.

GEOS3321

Fundamentals of Petroleum Geology

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOL1111/GEOS1111, GENS7601, GENS7602

Introduction to the earth sciences; nature and properties of rocks and minerals; sedimentation and sedimentary environments; stratigraphy and the geological time scale; geological maps and structures; introduction to plate tectonics. Nature and geological properties of petroleum; petroleum generation, migration, entrapment and degradation; sedimentology of petroleum-bearing sequences; primary and secondary porosity; structural and stratigraphic traps; formation waters; coal-bed methane, oil shale and other non-conventional petroleum sources; geological and geophysical methods in petroleum exploration and development; regional geology of selected petroleum basins.

Note: The one day field excursion is a compulsory part of the course and students will incur some personal costs.

GEOS3331

Petroleum Reservoir Geophysics

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

GEOL5321 or GEOL1111/GEOS1111 or GEOL1211/GEOS1211

Excluded: GEOL5332

The applications of geophysics in 3D mapping of geological structures. Interpretation of 2D and 3D seismic reflection data, including horizontal and vertical slices, presentation parameters, horizon autotracking, fault mapping, stratigraphic and structural interpretation, reservoir evaluation. Inversion of seismic reflection data to determine petrophysical properties. Analysis of direct hydrocarbon indicators

GEOS3341

Special Topics in Petroleum Geoscience

School of Biological, Earth and Environmental Sciences
UOC3 HPW3

Instruction by lectures, tutorials and assignments in aspects of geoscience and their application to the petroleum industry. Individual students will select modules, covering topics such as sedimentary rocks and clay minerals, groundwater hydrology, geophysics, coastal monitoring and environmental assessment, complemented by a relevant project task.

GEOS3731

Catchment and Coastal Geomorphology

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOG3025, GEOG3731.

This course provides a lecture and field-based study of the processes responsible for shaping and modifying Australian and global landforms. An overview of the theoretical framework of geomorphology will provide the foundation for the theme of the course "from catchment to coast". Topics covered include catchment hydrology, slope evolution, erosion and sediment transport, fluvial systems and coastal processes and landforms. Application of geomorphology to land and resource management will be emphasised.

Note: Field data form the basis of laboratory work and the compulsory field trip to collect these data will involve expense to individual students.

Assumed knowledge: GEOS2721

GEOS3761

Environmental Change

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Excluded: GEOG3062, GEOG3761.

The nature of environmental change on the land, oceans, biosphere and atmosphere. Evolution of the continents, oceans, life and atmosphere. Techniques for environmental reconstruction and chronology building. Quaternary climatic change and modelling. Human impact on the atmosphere and climatic consequences.

GEOS3811**Advanced Techniques in Remote Sensing**

School of Biological, Earth and Environmental Sciences

UOC6 HPW6

Excluded: GEOG3032, GEOG3811.

Theory and application of state-of-the-art remote sensing technologies including hyperspectral and radar remote sensing systems; standardisation of datasets using geometric, radiometric and atmospheric correction techniques; use of spectrometers, radiometers, scatterometers and spectral libraries in remote sensing analysis; introduction to geophysical remote sensing; fusion of multi-resolution imagery; mini-project work in either vegetation/land use applications. soils/geology applications or fluvial/marine applications.

Assumed knowledge: GEOS2811

GEOS3821**Remote Sensing and GIS Applications**

School of Biological, Earth and Environmental Sciences

UOC6 HPW4

Excluded: GEOG3821

The fields of Geographic Information Systems and Remote Sensing have expanded considerably over the past decade and the world has become very much richer in digital geographic information. Vast amounts of geographic data are routinely collected and new sources of remotely sensed hyperspectral, radar and geophysical data are now available. These complex data, although providing previously unattainable information about the Earth, also reduce the efficacy of many traditional methods of analysis. An increased requirement to build applications-specific solutions and simulations has therefore become imperative in the context of the need to plan for eg. a changing climate, optimise agricultural productivity for an increasing population, and to provide niche marketing analysis for business. This course explores a range of highly complex, often non-deterministic, problems in GIS and Remote Sensing. It explores a true enabling technology for the natural sciences in addition to a rich source of computational and representational challenges for the computer sciences. Topics covered include: classification methods, dynamic spatio-temporal modelling, error analysis and data accuracy, geostatistics, hyper-dimensional analysis, and network analysis. This course emphasises a range of GIS and Image Processing approaches via a disparate selection of real-world applications.

Assumed knowledge: GEOS2811 or GEOS2821

GEOS4415**Physical Geography Honours**

School of Biological, Earth and Environmental Sciences

UOC6

A 6UOC research project to be completed in one session

GEOS4416**Honours in Physical Geography Research Project 12uoc**

School of Biological, Earth and Environmental Sciences

UOC12

A 12 UOC research project in physical geography to be completed within a single session.

Note: Plus BEES4511, and 18 UOC from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at Stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of Stages 1-3 of Advanced Science study plans in Geoscience, completion of Stages 1-3 of the Environmental Science degree or a Major in Physical Geography or Earth Environmental Science with a Credit average or better in stage 3 Physical Geography courses.

GEOS4417**Research Project Honours in Physical Geography 18 UOC**

School of Biological, Earth and Environmental Sciences

UOC18

A 18 uoc research project in physical geography to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience, completion of stages 1-3 of the Environmental Science degree or a Major in Physical Geography

or Earth Environmental Science with a credit average or better in stage 3 Physical Geography courses.

GEOS4418**Honours Geography**

School of Biological, Earth and Environmental Sciences

UOC24

A 24 uoc research project in physical geography to be completed within a single session.

GEOS4721**Current Issues in Land Management**

School of Biological, Earth and Environmental Sciences

UOC6 HPW4

Excluded: GEOG4320.

The aim of this course is to examine the major forms of land degradation and practical solutions to land management problems. This course aims to consolidate the current level of knowledge of national and global land degradation issues, but with an emphasis on eastern Australia. The main issues covered will include vegetation clearance, desertification, salinisation, global climate change and greenhouse, soil health, and wind and water erosion. The format will comprise formal lectures, some by visiting experts, and student presentations.

Note: A one week compulsory field trip provides an opportunity to visit farms and research institutions in Cowra, Young and Wagga Wagga and to discuss land degradation and conservation issues with land management agencies and local landholders.

Assumed knowledge: GEOS2721

GER1400**Introductory German 1**

German Studies

UOC6 HPW6

Excluded: GENT0426

Aims to provide students who have little or no previous knowledge of German with basic communicative skills in listening, speaking, reading and writing. Incorporates an introduction to the culture of the German-speaking countries into language study.

Note: Excludes students qualified to enter GERS1600 or GERS1700.

GER1401**Introductory German 2**

German Studies

UOC6 HPW6

Prerequisite: GERS1400

Further consolidation and development of language skills acquired in GERS1400 or an elementary German language course of comparable format.

GER2400**Intermediate German 1**

German Studies

UOC6 HPW5

Prerequisite: GERS1000 or GERS1022 or GERS1401; Excluded: GERS2021

Designed for students with HSC German or two semesters of elementary German at tertiary level. Develops and extends skills in listening, speaking, reading and writing German and provides an introduction to German Studies. Includes 1 hour per week lecture on cultural aspects of German-speaking countries.

GER2401**Intermediate German 2**

German Studies

UOC6 HPW5

Prerequisite: GERS2400 or GERS2021; Excluded: GERS2022

Further develops and extends language skills acquired in GERS2400 and continues introduction to German Studies. Includes 1 hour per week discussion or German literary texts.

GER3410**Advanced German 1**

German Studies

UOC6 HPW4

Prerequisite: GERS2401 or GERS1601; Excluded: GERS2605, GERS1700

Designed for students with advanced German language skills. Extends and consolidates these skills through the study of authentic German texts discussing contemporary issues in German-speaking societies. Includes 1 hour per week lecture or individual project.

GER3411**Advanced German 2**

German Studies

UOC6 HPW4

Prerequisite: GERS3410 or GERS2605; Excluded: GERS2606, GERS1701

Further extends and consolidates advanced German language skills and discussion of contemporary issues in German-speaking societies. Includes 1 hour per week discussion of German literary texts or individual project.

GER3700**Advanced German 3**

German Studies

UOC6 HPW3

Prerequisite: GERS2701; Excluded: GERS3141, GERS3142.

Designed for students with very advanced German language skills, including native speakers. Concentrates on aspects of advanced German grammar and/or techniques of translation. Includes 1 hour per week lecture on cultural aspects of German-speaking societies or individual project.

GER3701**Advanced German 4**

German Studies

UOC6 HPW3

Prerequisite: GERS2701 or GERS3700

Further concentrates on aspects of advanced German grammar and/or techniques of translation. Includes 1 hour per week discussion of German literary texts or individual project.

GER3800**Modernism & Cultural Innovation in Weimar Germany**

German Studies

UOC6 HPW3

Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores the social and historical foundations of the Weimar Republic and its innovative and modernist cultural scene, including visual arts, film, architecture, music, literature, theatre and the new media (radio, journalism), as well as developments in social and cultural theory.

GER3801**Language & Society in the German-speaking Countries**

German Studies

UOC6 HPW3

Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores norms and varieties of the German language and their relationship to different regions and population groups.

GER3802**German Culture and Society: 19th and 20th Century**

German Studies

UOC6 HPW3

Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores aspects of German culture and society in the 19th and 20th century through the study of selected texts.

GER3803**Post-war German Literature and Culture: Hans Magnus Enzensberger**

German Studies

UOC6 HPW3

Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores the essayistic work of one of the leading social theorists and cultural critics of postwar Germany, covering a wide range of topics, including media theory, multiculturalism, globalisation, war and violence.

GER3900**German Studies Pre-Honours Program 1**

German Studies

UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of credit of German at credit level

An advanced seminar on selected topics on the literature, culture, history, language and society of the German-speaking countries. Particular emphasis will be placed on research methodology and critical writing.

GER3901**German Studies Pre-Honours Program 2**

German Studies

UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of credit of German at credit level

An advanced seminar on selected topics on the literature, culture, history, language and society of the German-speaking countries. Particular emphasis will be placed on research methodology and critical writing.

GER3901**German Honours (Research) Full-Time**

German Studies

UOC24 HPW5

Prerequisite: 54 units of credit in German Studies at an average of 70%, including GERS3900 and GERS3901

Two seminars on literary, linguistic or historical topics; and practical language work as required. A thesis of approximately 15,000 - 20,000 words on a topic approved by the Coordinator.

GER3901**German Honours (Research) Part-Time**

German Studies

UOC12 HPW3

Prerequisite: 54 units of credit in German Studies at an average of 70%, including GERS3900 and GERS3901

Two seminars on literary, linguistic or historical topics; and practical language work as required, but taken part-time over two years. A thesis of approximately 15,000 - 20,000 words on a topic approved by the Coordinator.

GER3901**Combined German Honours (Research) Full-Time**

German Studies

UOC12 HPW2

Prerequisite: 48 units of credit in German Studies, including GERS3900 at 70% or better

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Practical language work as required. A thesis on a topic approved by the two Schools/Departments concerned.

GER3901**Combined German Honours (Research) Part-Time**

German Studies

UOC6 HPW2

Prerequisite: 48 units of credit in German Studies, including GERS3900 at 70% or better

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Practical language work as required, taken part-time over two years. A thesis on a topic approved by the two Schools/Departments concerned.

GLST1100**Introduction to Globalisation**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program; Excluded: SOCA1006, INST1003

Considers how the transnational flows of people, goods, culture and capital are changing the significance of locality and national societies in shaping social life. Examines questions of belonging by looking at migration, refugees and citizenship. Looks at the emergence of global culture through a study of the emergence of global and multicultural cities, new patterns of consumption for pleasure, and the role of media and communications in globalisation. Explores the issues of global governance and examines the cultural and political responses to globalisation in anti-globalisation movements, fundamentalism and economic strategies.

GLST1200**Women, Gender & World History**

School of History

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs; Excluded: HIST1020, WOMS1003

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

GLST2101

(Un)Making the Third World: History and Global Development B

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: COMD2010, HIST2040, HIST2060, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

GLST2102

(Un)Making the Third World: History and Global Development A

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: COMD2020, HIST2061, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

GLST2103

The United States and Changing Global Orders

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: HIST2510, SPAN2431

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

GLST2104

Globalisation and Uneven Development

School of Politics and International Relations

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program, 36 units of credit; Excluded: INST2400, SLSP2701

Examines the problems and political prospects of 'Third World' or 'Less Developed' countries in the context of the development of a global economic and communications system. The first part examines the historical development of the system, the second part looks at its current structure and functioning and the third part considers the specific role of less developed countries and regions within the global system.

GLST3000

Global Studies and Global Transformations

School of Modern Language Studies

UOC6 HPW3

Prerequisite: 96 units of credit in Program 3415, 4768, 3424 or 4765; Excluded: INST3000

Provides a detailed examination of the key theoretical debates in the emergent fields of international, transnational and global studies. Discusses the growing array of conceptual and empirical efforts to explain the dynamics of global transformations in the post-Cold War era. Provides Global Studies students with the opportunity to evaluate their time overseas and link it to a detailed discussion of historic and contemporary processes of global transformation.

GMAT0411

Surveying in Building and Construction

School of Surveying & Spatial Information Systems

UOC3 HPW3

Overview of services provided by Surveyors/Geomatic Engineers. Linear and angular measurement. Setting out. Levelling: laser levelling. Electronic tachemetry. Earthwork surveys. High-rise building surveys; quality assurance. Basic land law and cadastral surveying; subdivision surveys.

GMAT0442

Surveying for Civil Engineers

School of Surveying & Spatial Information Systems

UOC3 HPW3

To provide civil engineering students an introduction to and understanding of the basic principles of surveying as it applies to civil engineering works. Topics include: Linear and angular measurement (band and electronic distance measurement): Levelling principles and applications including laser levelling and bar code levelling; 3D coordinate systems; Traversing and control surveys, "field-to-finish" electronic detail surveys, electronic data recording; horizontal and vertical curves and construction survey set outs; areas and volumes, surveys to monitor deformations of structures and mine walls; GPS (satellite positioning); and an introduction to consulting services available from Surveyors and Geomatic Engineers.

GMAT0443

Surveying for Mining Engineers

School of Surveying & Spatial Information Systems

UOC3 HPW3

To provide the fundamental principles and demonstrates the relevance of surveying to mining engineering. Topics include: Principles of surveying; levelling principles and techniques; contouring; theodolites: angle measurements, instrument and survey errors; distance measurement techniques; coordinate calculations; control surveys; traversing; area and volume calculations. Also an introduction to: GPS satellite positioning; deformation monitoring surveys; map projection coordinates and calculations; correlation of surface surveys with underground surveys; shaft plumbing; transfer of height and coordinates; concept of azimuth. Awareness of other contemporary surveying topics.

GMAT0491

Survey Camp

School of Surveying & Spatial Information Systems

UOC3 HPW3

CoRequisite: GMAT0442

A one-week field camp (on campus, usually in mid-year recess) for students studying GMAT0442 Surveying for Civil Engineers.

GMAT0753

Introduction to Spatial Information Systems

School of Surveying & Spatial Information Systems

UOC3 HPW3

Prerequisite: CIVL2710, MATH2869, MATH2019

To provide Environmental Engineers with an overview of the resources and analytical tools in Spatial Information Systems applicable to their discipline, and to provide an understanding of the roles of other professions in SIS. An introduction to coordinate reference systems, with particular reference to Australia. Overview and background of spatial information systems. Explanations of definitions and terminology of LIS and GIS. Introduction to remote sensing. Sources of spatial information, field surveys including GPS, maps, aerial photography, satellite imagery. Introduction to image analysis techniques for remote sensing. Introduction to geographical information systems for display, management and analysis of spatial information. Modelling and analysis techniques and software for GIS. Application of above to environmental engineering. A view of the future.

GMAT1100**Principles of Surveying**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Induction to Surveying and Spatial Information Systems: to gain exposure to the range of topics covered in Surveying and Spatial Information Systems, hands-on experience with the School's facilities and laboratories, and to develop teamwork amongst the students. Horizontal reference frames and positions. Tubular bubbles, surveying telescopes. Theodolites; direction measurement. Distance measurement with steel tapes, bands and electronic tacheometers. Total stations. GPS positioning. Detail surveys. Levelling, level runs, instrument errors and tests. Field techniques and data recording. Use of minor survey equipment. Reconnaissance surveys: field sketches and planning. Recovery sketches.

GMAT1150**Survey Methods & Computations**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Prerequisite: GMAT 1100

Principles of calculations. Intersection, resection, trilateration, traverse measurements and calculations. Missing data problems. Traversing, types of traverses, errors in traverses, errors detection and adjustment. Road intersections. Area calculations. Subdivision calculations. 2D similarity transformations and PO adjustments. Spherical trigonometry. Contour surveys. Detail surveys, radiations, use of theodolite and EDM, field procedures, electronic tacheometers and electronic fieldbooks/data recorders, field sketches, principle and computation of free stationing.

GMAT1200**Visualisation of Spatial Data**

School of Surveying & Spatial Information Systems
UOC6 HPW4

Principles of visual communication. Drafting, plotting, contouring, field sketches. Computer painting, drawing and CAD. Cartographic design. Map use. Charts and graphs. 2D-3D visualisation. Engineering drawing: orthographic and pictorial. Descriptive geometry. Web page design. Interpreting technical drawings; cadastral and engineering. Powerpoint presentations. Sun direction calculations and shadow diagrams.

GMAT1300**Computing Applications in Geomatics**

School of Surveying & Spatial Information Systems
UOC6 HPW4

Applications of computing technology to Geomatics including the development of proficiency with commonly used software packages. Overview of hardware, operating systems, networks, the internet, applications software, and peripherals including storage media, printers, scanners, digitizers. Use of word processors, spreadsheets, databases, presentation packages, graphics and visualisation packages, publishing and multi-media, browsers and email. The application of these packages to various aspects of Geomatics including data input, data manipulation, data management and storage, data presentation and communication.

GMAT1400**Land Studies in Geomatics**

School of Surveying & Spatial Information Systems
UOC6 HPW5

What is "Land"? Topographic and geomorphological descriptions of land. Land cover classification: soils and vegetation. Land use: rural and urban land. Land value and land economics. Land as a recreational resource, national parks, and ecological issues. Land as Real Estate. Land ownership and rights to use and redevelopment. Land from the cultural, social and spiritual perspectives. Native and other forms of "title". Land, water and air space rights. Law of the Sea and sovereign rights over marine resources. State, Local and Federal Government jurisdictions over land. Professional communications will be an integral component of the subject. Students will be expected to analyse the subject material and prepare appropriate responses, including: poster presentations, addresses to a mock local government council meeting, PowerPoint presentations, and application of research methodology for the WWW and subsequent preparation of reports.

GMAT2100**Electronic Surveying Instrumentation: Principles & Practice**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Prerequisite: GMAT1100, GMAT1150 Co-requisite: MATH2829

Precise digital levelling (bar code) instruments and techniques; design, accuracy, errors. Precise levelling techniques, design and location of bench marks. systematic and random errors, motorised levelling. Electronic theodolites, construction, circle reading, level sensors, centring systems, constrained centring, electronic data recording. Sources, testing and elimination of errors in electronic theodolites, eccentricities of alidade and horizontal circle. Vertical circle and level sensor errors; circle graduation errors. Centring and levelling of theodolites. Precise horizontal angle measurement, definition of an arc of directions, observation procedures, elimination of errors, National and State specifications; precise zenith angle measurement. Trigonometric heighting, effects of earth curvature and refraction, observation procedures, precision of computed heights; EDM-height traversing.

GMAT2110**Electronic & GPS Positioning Technologies**

School of Surveying & Spatial Information Systems
UOC6 HPW5

CO.GMAT2100,GMAT2300, PRE. GMAT1100,GMAT1150

Principles and applications of EDM: basic working principles; phase measurement techniques, coefficient of refraction, flight-time measurement in short range pulse distance meters, working principles of microwave distance meters; wave propagation in atmosphere, atmospheric transmittance and range equation; measurement of atmospheric parameters, velocity corrections; geometric reductions, reductions of distances to the spheroid, analysis of errors, corrections to EDM measurements; electro-optical distance meters; calibration of electro-optical instruments; reflectors; field procedures. GPS surveying; the GPS signal and measurement characteristics; GPS instruments; GPS planning, field and office procedures; GPS observations and equations; baseline measurements; networks; presentation of GPS measurements, datums, coordinate systems and heights; data acquisition from maps and images.

GMAT2200**Geographic Information Systems & CAD**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Corequisite: GMAT 2110, GMAT 2700

Inputting both spatial and attribute data to the GIS. Transformation of data between coordinate systems, such as digitizer coordinates, geodetic and geographic coordinates, and map projection coordinates. Editing data and creating topologically clean data. Tagging spatial data with attributes, linking spatial data to attribute databases. Use of basic analysis functions: spatial selection, attribute selection, making reports of spatial and attribute data, interfacing to the system using a high level language. Surveying CAD familiarisation with at least one CAD package commonly used in engineering surveying. Data entry for detail survey. Editing and setting attributes within the package. Contouring. Plan drawing. Demonstration of alternative CAD packages.

GMAT2300**Analysis of Observations**

School of Surveying & Spatial Information Systems
UOC3 HPW3

Prerequisite: MATH 1231, GMAT 1150; Corequisite: MATH 2019.

Least squares principles and reasons for applying least squares solutions. Modelling observations, observation equations, parametric method, condition method. Linearisation of equations. Derivation of least squares; methods of forming normal equations. Worked examples in various areas of geomatics. The derivation of variance-covariance matrices. Analysis of variance-covariance matrix, application of statistics and error analysis in geomatics; error ellipses. Determining input into least squares using typical adjustment software. Introduction to advanced least squares.

GMAT2350**Computing for Spatial Information Sciences**

School of Surveying & Spatial Information Systems
UOC3 HPW3

Corequisite: GMAT1300

Principles of program design. Algorithm development and programming languages. Procedural programming and event driven programming. Variable types, input, output, event, syntax, loops, condition statements, procedures, forms and controls, menus and multiple document interface. Applications and GUI; application development in common programming languages. Exercises in program development relevant to Surveying and Spatial Information Systems throughout the course.

GMAT2700**Geometry of Coordinate Reference Systems**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Cartesian coordinate systems, applications of Cartesian coordinate transformations in geomatics. Mathematical transformations between geodetic, Cartesian and topocentric coordinate systems, ellipsoid geometry, orthometric and ellipsoid height systems; Keplerian orbit representation and the transformation of Keplerian elements into other satellite coordinate and velocity representations. Map projections and ellipsoidal geometry, principles of map projections, surveying and mapping projections, transverse Mercator projection, ellipsoidal computations. Corrections to field observations. Geodetic and astronomical reference systems; the relationship between natural and geodetic reference systems, deflection of the vertical; geoid models and reference ellipsoids, height systems, celestial coordinate systems. Geodetic coordinate systems and datums; definition of AGD, GDA and AHD.

GMAT3100**Surveying Applications**

School of Surveying & Spatial Information Systems
UOC6 HPW5

This course introduces the student to a wide variety of surveying applications undertaken as part of engineering projects. The student will be expected to perform common engineering surveying tasks such as the determination of volumes as well as the design, computation and set out of horizontal and vertical curves, roads, buildings and large structures. In addition, selected topics of specialist survey applications will be dealt with using lectures, site visits, guest speakers and technology demonstrations. Topics will be selected from the following areas of special surveys: mining surveying (including Azimuth transfer, north-seeking gyro theodolites, plumbing of shafts and high structures), industrial surveying, tunnel engineering, hydrographic surveying, alignments, monitoring of deformations and settlement of terrain, structures and machines, design of precise engineering networks, dimensional measurement.

GMAT3150**Field Projects**

School of Surveying & Spatial Information Systems
UOC6

At camp, a survey project of substantial extent is carried out involving detail surveys, contour surveys and the setting-out of a road. The processing of the field data and the preparation of plans and reports is done during session.

Note: Students are required to attend a one week survey camp during the mid-year recess equivalent to 3 contact hours per week followed by three hour per week processing during session.

GMAT3200**Geospatial Information Techniques and Applications.**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Concepts and definitions of spatial systems, coordinate systems, mapping and spatial issues with maps, data structures including vector, raster and surface modelling. An overview of the components of the technology, database management in the context of spatial data, database design, data acquisition techniques including overviews of digitizing, scanning, field survey and remote sensing, the data conversion process, data management, display of geo-spatial data, cartography, colour and 3D views. Analysis of geospatial problems including components of data acquisition and database development, spatial analysis and display, and customising and performing advanced analysis using macro languages and integrating with other software, using the World Wide Web to disseminate information. Management and institutional issues including how the technology and data is used by various organisations and government departments, geospatial data issues for government and industry, standards, Metadata, legal issues associated with these systems, intellectual property, copyright, liability, project management and implementation of these systems.

GMAT3400**Cadastral Surveying 1**

School of Surveying & Spatial Information Systems
UOC3 HPW3

The legal system in Australia and NSW; the nature of land law including land tenure, estates in land, interests in land. Land title systems. Land administration in Australia and NSW. Boundary surveying principles. Cadastral mapping in NSW.

GMAT3410**Land Economics & Valuation**

School of Surveying & Spatial Information Systems
UOC3 HPW2

The surveyor's role in the economic use of land. Variation of land use and land value. Temporal change of land use due to supply and demand, and its effect on land development and urbanisation. Location theory, public measures for directing land use, introduction to valuation; factors affecting value of land, valuation principles and practice.

GMAT3450**Cadastral Surveying 2**

School of Surveying & Spatial Information Systems
UOC3 HPW3

Survey investigation for both artificial and natural boundaries; survey and title searching. Field note preparation for cadastral surveying. Survey marking and preparation of plans of survey. Study of appropriate statutes and regulations. Cadastral survey techniques for urban and rural properties; the status of roads in NSW, strata plan surveys, identification surveys, consents for MHWM, railways, rivers, kerbs in Sydney. The role of coordinates in cadastral surveying.

GMAT3500**Photogrammetry and Remote Sensing**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Introduction to geometric and spectral properties of remotely sensed images. Analogue and digital images - photography, electro-optical and microwave systems. Introduction to the physics of visible, infrared and microwave remotely sensed imagery. Atmospheric effects. Image geometry - central projection, scan and microwave systems. Concept of stereovision. Inner orientation of central projection, collinearity equations, deviations from collinearity. Exterior orientation of sensor systems; object geometry from overlapping images, for block photography for aerial and close range applications. Digital photogrammetric workstations and their functions. Photogrammetric project planning. Image interpretation.

GMAT4000**Thesis Part A**

School of Surveying & Spatial Information Systems
UOC3 HPW2

GMAT4000 is to be taken in the second last session required for the completion of all requirements for the award of the BE degree. Generally, the thesis involves directed laboratory, investigatory, design, field or research work on an approved subject under the guidance of members of the academic staff. Time devoted to the thesis is two hours per week in Session 1 (Part A) for library methodology instruction and preliminary work. Each student is required to prepare a thesis proposal with literature review and a short seminar as part of the requirements for GMAT4000 Thesis Part A. Satisfactory performance in course GMAT4000 is a prerequisite for progress to GMAT4001.

GMAT4001**Thesis Part B**

School of Surveying & Spatial Information Systems
UOC9 HPW8

Prerequisite : GMAT4000

Satisfactory performance in course GMAT4000 is a prerequisite for GMAT4001. GMAT4001 is to be taken in the last session required for the completion of all requirements for the award of the BE. Generally, the thesis involves directed laboratory, investigatory, design, field or research work on an approved subject under the guidance of members of the academic staff. Session 2 (Part B) is for the major part of the thesis work. Students are required to report on their work at a thesis conference in Week 15, Session 2 and to present a written report on the work undertaken in this course. A supervisor guides each student, but the successful completion of the project, the writing of the thesis and the submission of two bound copies by specified deadlines, for example, are the sole responsibility of the student. Students are required to submit a log book and report detailing at least 60 days of professional practice (industrial training).

GMAT4020**Project in Surveying and Spatial Information Systems**

School of Surveying & Spatial Information Systems
UOC6 HPW5

Prerequisite: GMAT3150

Projects will involve small groups of students working as a team to complete the execution of specially designed multi-faceted selected tasks in Surveying and Spatial Information Systems. Topics may be the remote sensing analysis of the environment from satellite images, a digital photogrammetric mapping task, setting up a precise geodetic control network, the use of precise GPS techniques to map the local road network and insert this data into a GIS system, a precise engineering survey or the development and analysis of a geospatial database of a region. Students will be required to present the results of their project in a well written report and verbally at the annual thesis conference (Week 15, Session2).

GMAT4400

Land Management & Development Project 1

School of Surveying & Spatial Information Systems
UOC6 HPW2

Design and studio project for a residential neighbourhood development. Constraint and site analysis: preparation of maps of land use, vegetation, surface and soils, drainage and terrain, slopes, climate and aspect; composite overlay maps. Structure plan design: residential precincts, schools, commercial areas, industrial areas, active and passive recreation, pedestrian ways and road hierarchy. Continuation of design and studio project for a residential neighbourhood development. Plan of detailed lot layout: consideration of access, grades, drainage reserves, parks and pedestrian ways.

GMAT4410

Land Subdivision & Development

School of Surveying & Spatial Information Systems
UOC3 HPW3

Subdivision and development control in New South Wales. Administration of subdivision and development under Local Government and environmental planning and assessment legislation; procedures and legal controls. Statutory requirements for land development and subdivision of land, particularly as they apply to broad-acre subdivisions.

GMAT4450

Land Management and Development Project 2

School of Surveying & Spatial Information Systems
UOC6 HPW2

Engineering design and plans: catchment details, road longitudinal and cross-sections, drainage layout, flow schedule, hydraulic grade line calculations, longitudinal sections of kerb profiles. Detention systems, infill subdivisions, shadow diagrams, driveway designs.

GMAT4700

Project Management 1

School of Surveying & Spatial Information Systems
UOC3 HPW3

Types of business, ethics. Organisational and management principles. Goals, strategies and actions. Phases of a project: feasibility study, pilot project, contract work, final report, and control. Principles of project management: organisation, management, planning responsibilities, information control. Communication: meeting, negotiation, conflict, dialectic for managers. Financial management reporting, accounting systems, cash flow, cash flow analysis. Budgeting (financial, personnel, equipment), personnel planning. Management of the project resources.

GMAT4750

Project Management 2

School of Surveying & Spatial Information Systems
UOC3 HPW3

Aims and forms of project organisation. Preparation of contracts and specifications: contract law, subcontracting, contract work, bidding. Project scheduling, control and documentation. Project teams in a corporation. Psychology of professionals. Qualifications of a project manager. Decision making process in project management: authority, power, interaction, leadership, assignments. Human resource management: small group behaviour, learning curve, management of teams in professional practice, professional liabilities and responsibilities. Case studies in the application of project management.

GMAT4850

Surveying and Spatial Information Systems for Sustainability

School of Surveying & Spatial Information Systems
UOC3 HPW3

A brief introduction and relevance to Surveying and Spatial Information Systems (SIS). Why are we concerned about sustainability? Principles of sustainability (inter- and intra-generational equity, conservation of biodiversity, the precautionary principle, internalisation of environmental costs). Conservation of biodiversity and ecological integrity. Why is maintenance of biodiversity and ecological processes (free goods!) important? Current trends in impacts on global biodiversity. Special features of Australian biodiversity and ecosystems and our special responsibilities. The precautionary principle in sustainability. A key issue in the move to sustainability: energy use - forms and conservation in transport and settlement and impact on climate change (Enhanced Greenhouse Effect). The influence of Surveying and SIS. The Enhanced Greenhouse Effect. A systems approach in applying the sustainability principles in the practice of Surveying and SIS. Implementing sustainability - how? Monitoring and reporting progress to 'sustainable futures'. State of the Environment reporting - roles and examples. The 'sustainable' organisation. Meeting community expectations. Transparency, trust and public participation. Putting the pieces together for environmental applications. Looking to the future.

GMAT4900

Principles of GNSS Positioning

School of Surveying & Spatial Information Systems
UOC6 HPW3

This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning, for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, which allows the student to develop algorithms for real and simulated data processing. Local, regional and wide area differential positioning will also be considered. Land, marine and airborne positioning applications will be discussed.

GMAT4910

Modern Navigation & Positioning Technologies

School of Surveying & Spatial Information Systems
UOC6 HPW3

This course presents an overview of the various satellite-based and non-satellite navigation technologies and some of their applications. Particular emphasis will be placed on the role such positioning technologies will play in Intelligent Transport Systems (ITS). Various user receiver configurations, system augmentations and implementation issues will be analysed. These include: differential GPS (DGPS) schemes and services, real-time systems and their communication links, pseudo-range and carrier phase-based techniques, pseudolites, and combined GPS/GLONASS positioning. In addition, the role of other sensors (such as gyros, accelerometers and inertial navigation systems (INS)) and ancillary data (such as digital maps) can play in ITS positioning/navigation will be discussed. Data fusion techniques for integrating GPS (or GLONASS) with INS, such as Kalman Filtering, will be presented. Students will gain hands-on experience with a variety of navigation receiver and sensor technology.

GREK1301

Introductory Modern Greek 1A

Modern Greek Studies

UOC6 HPW5

Excluded: GENT0427, GREK1001

Aims to enable students to communicate in a Greek-speaking environment, to discuss everyday topics, and, for example, to read and write a simple letter.

Note: Intended for students without any knowledge of Greek.

GREK1302

Introductory Modern Greek 1B

Modern Greek Studies

UOC6 HPW5

Prerequisite: GREK1301 or GREK1001; Excluded: GREK1002

Further consolidation and development of language skills acquired in GREK1301.

GREK2301

Intermediate Modern Greek 2A

Modern Greek Studies

UOC6 HPW5

Prerequisite: GREK1302, GREK1002; Excluded: GREK1101, GREK2010

Aims to enable students to understand and use Greek accurately, and to develop structural understanding of the language to a point where it can become a practical asset. Includes a review of Modern Greek grammar. Equal emphasis is given to the four basic skills of comprehension, speaking, reading and writing. Reading will be taught partly through a selection of simple literary texts and songs.

GREK2302

Intermediate Modern Greek 2B

Modern Greek Studies

UOC6 HPW5

Prerequisite: GREK1101 or GREK2301; Excluded: GREK1102

Continues with the development of comprehension, speaking, reading and writing skills acquired in GREK2301.

GREK3301

Advanced Modern Greek 3A

Modern Greek Studies

UOC6 HPW4

Prerequisite: GREK2302 or GREK1102 or HSC Modern Greek;

Excluded: GREK1200, GREK1201, GREK2003

Aims to enable students to advance their ability to understand and use Greek accurately, and to develop a structural understanding of Greek to the point where it can become a professional asset. Includes a review of Modern Greek grammar. Reading will be taught partly through a selection of literary texts.

GREK3302

Advanced Modern Greek 3B

Modern Greek Studies

UOC6 HPW4

Prerequisite: GREK3301 or GREK1201; Excluded: GREK1202, GREK2004

A continuation of GREK3301 with further consolidation and development of language skills.

GREK3401

Advanced Modern Greek 4A

Modern Greek Studies

UOC6 HPW3

Prerequisite: GREK3302 or GREK2022 or GREK1202; Excluded: GREK2203, GREK3001

An intensive study of the Greek language through texts in different styles and registers (including literary works and journalism). Develops the ability to assimilate texts at various levels of complexity, and cultivates discursive competence in spoken as well as written Greek.

GREK3402

Advanced Modern Greek 4B

Modern Greek Studies

UOC6 HPW3

Prerequisite: GREK3401 or GREK2022; Excluded: GREK2204, GREK3002

A continuation of GREK3401.

GREK3500

Traditional Greek Culture

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK2202

Introduces a variety of folksongs, proverbs, popular tales and shadow theatre (Karagiozis) and explores Greek society, aspects of which still play an important role in people's living.

GREK3501

Pandora's Box

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK3205

Mythical heroes and heroines in Greek tragedy are treated as human archetypes which are demythologised and brought down to earth. The tragedies generate universal truths and illuminate aspects of the human condition. Examines gender issues in five tragedies and gives students the opportunity to observe the consistency with which basic attitudes of men and women have endured through the centuries in western society.

GREK3502

Greek Women Writers

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK3202

Examines a number of literary texts written by women within the framework of feminist literary criticism.

GREK3503

The Modern Greek Experience

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK2201

Examines the society and historical experiences of Greeks in the twentieth century, through literature and film.

GREK3504

Greek Music: From Homer to Haroula

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Considers the evolution of Greek music from ancient times to the present, including music in antiquity, Orthodox (Byzantine) church music, folksong, rebetika (the Greek "blues"), the national school of symphonic music, and popular composers from the 60s on, such as Theodorakis and Hadjidakis, with emphasis on their settings of modern poetry. Considers the relation between music and society, processes of cultural continuity and change, and elements of diversity and unity within and between musical cultures.

GREK3505

Born to the Purple: The Byzantine World (330-1453)

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2202

Examines the Byzantine world, from its origins in the late antique world, through the Middle Ages, to its political and cultural legacy in the early modern world. Focuses on political, social and religious developments in the Byzantine state and church, the manner in which Byzantine culture received and redeployed its Classical heritage, and its place between the European, African and Asian worlds.

GREK3506

The Modern Greek World (1453 - Present Day)

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2203

Examines the contemporary culture of Greece and Cyprus within its historical context. Considers the meaning of events such as the fall of the Byzantine Empire in 1453, the effects of western rule and Ottoman domination, the influence of the European Renaissance and Enlightenment, the movement for independence, the Asia Minor catastrophe, the Nazi and Fascist occupation and the military dictatorship of 1967-74.

Note: This course is compulsory for students who wish to major in Modern Greek. Taught in Greek.

GREK3900

Culture, Ethnicity & Identity in Greek Australian Literature

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of Greek at credit level; Excluded: GREK3203

Provides a study of Greek society and culture in Australia, together with a study of prose, poetry and drama texts written in Australia. Special emphasis is placed on the way socio-cultural and historical phenomena are represented in the works by Greek Australian literary writers.

Note: Option for Honours.

GREK3901

The History and Development of the Greek Language

Modern Greek Studies

UOC6 HPW3

Prerequisite: 36 units of credit including 12 units of Greek at credit level; Excluded: GREK3204

A study of the historical development of the modern Greek language and the socio-cultural significance and implications of 'diglossia' in the 19th

and 20th century Greece. Students will be required to study selected literary texts in Katharevousa (puristic Greek), Medieval Demotic Greek and Demotic (spoken Greek).

Note: Option for Honours.

GREK4000

Modern Greek Studies Honours (Research) Full-Time

Modern Greek Studies

UOC24 HPW5

Prerequisite: 54 units of credit in GREK with an average of 70%

The Honours program involves two session-length seminar courses, for which students are required to complete coursework, and a thesis of between 15,000 - 20,000 words on a topic approved by the Unit.

GREK4050

Modern Greek Studies Honours (Research) Part-Time

Modern Greek Studies

UOC12 HPW3

Prerequisite: 54 units of credit in GREK with an average of 70%

The Honours program involves two session-length seminar courses, for which students are required to complete coursework, and a thesis of between 15,000 - 20,000 words on a topic approved by the Unit.

HESC1501

Introductory Exercise Science

School of Medical Sciences

UOC6 HPW6

This course provides an overview of exercise science. Students will be introduced to the areas of exercise physiology, biomechanics, motor control, and exercise behavioural science. Basic concepts and theories in each of the areas will be outlined together with an overview of measurement techniques and basic statistics.

HESC1511

Lifestyle, Kinanthropometry, and Health

School of Medical Sciences

UOC6 HPW6

Pre req: HESC1501

This course will introduce students to the literature examining the effects of physical activity on health. In particular, the effects of exercise on lifestyle diseases will be described. The relation between structure and function within the context of physical movement will also be discussed. Health based screening and intervention techniques will also be outlined with students undertaking a personalised lifestyle change project.

HESC1531

Exercise Behavioural Science

School of Medical Sciences

UOC6 HPW6

Pre req: HESC1501

This course provides an overview of exercise behavioural science based on the concepts introduced in PSYC1001 Psychology 1A. It aims to acquaint students with those aspects of exercise behaviour that have relevance to health and exercise science. Topics covered include psychological responses to injury, exercise addiction, exercise motivation, the effect of exercise on the stress response, the exercise immune response, exercise and cognition, exercise and perception, and the effect of exercise on mental health.

HESC1540

Growth, Development, and Physical Activity

School of Medical Sciences

UOC3 HPW3

Prerequisites: HESC1501

This course will provide an introduction to the development of bones, joints, muscle tissue, nervous tissue, circulatory, and respiratory systems with reference to physical activity. The determining factors in growth and physical activity throughout the lifespan will be discussed and reviewed from multiple perspectives.

HESC2501

Exercise Physiology

School of Medical Sciences

UOC6 HPW6

Prerequisites: BIOC2181, ANAT2111, PHPH2501

This course focuses on how human structure and function is influenced by work and physical activity. Areas to be studied include energy metabolism

and liberation, endocrine physiology, applied muscle physiology, and applied cardiopulmonary physiology. The unit includes a number of laboratories covering different areas of exercise physiology.

HESC3504

Physical Activity and Health

School of Medical Sciences

UOC6 HPW6

Prerequisites: HESC1501, HESC1511, HESC2501

This course will introduce students to the literature examining the effects of physical activity on health. In particular, the effects of exercise on cancer, heart disease, vascular disease, lower back pain, stroke, hypertension, obesity, immune function, sleep, stress, and depression will be described. Health based screening and intervention techniques will also be outlined with students undertaking a supervised lifestyle change project through the Lifestyle Clinic.

HESC3521

Advanced Exercise Physiology

School of Medical Sciences

UOC6 HPW6

Prerequisites: PHPH2502, HESC2501

An advanced course linking previous physiological principles with aerobic and anaerobic based energy systems and metabolism. The course examines endocrine physiology and biochemistry of energy systems during exercise and looks at the responses and the adaptations that occur with exercise. The course will also cover ergogenic aids and associated detrimental physiological and pathological factors.

HESC3531

Cardiac Rehabilitation and Exercise

School of Medical Sciences

UOC6 HPW6

Prerequisites: PHPH2502, HESC2501

This course provides in-depth examination of cardiac rehabilitation and the cardiopulmonary system and exercise. Performance of the cardiopulmonary system in healthy and diseased people will be discussed. Extensive practical components involve cardiopulmonary and ECG assessment and related exercise clinical skills. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC3561

Research Topics in Health and Exercise Science

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC2501

Initially, in this course a research review will be carried out. Then the student will learn a range of research skills and techniques in their chosen area. The student will both observe and practice data collection in the laboratory of their choice. A report is to be written in the form of a research review and a summary of the skills and techniques acquired.

HESC3571

Motor Control and Dysfunction

School of Medical Sciences

UOC6 HPW6

Prerequisites: ANAT2111, PHPH2502, SESC2451

This course presents a broad overview of how humans plan and execute movement at a systems level of analysis. Emphasis is placed on the relationship between motor behaviour and the way in which the nervous system is organised. The implications of nervous system organisation for motor learning and the treatment of a range of neuro-motor disorders are discussed.

HESC3581

Physical Activity in Special Populations

School of Medical Sciences

UOC6 HPW6

Prerequisites: PHPH2502, HESC2501

The focus of this course is on special populations and their special needs for engaging in physical activity. The course will introduce students to the literature examining the effects of physical activity on health. In particular, the influence of physical activity on the health of children, women, ageing adults, pain, arthritic, and asthmatic patients will be described. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC3591**Research Topics in Health and Exercise Science**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC2501

Initially, in this course a research review will be carried out. Then the student will learn a range of research skills and techniques in their chosen area. The student will both observe and practice data collection in the laboratory of their choice. A report is to be written in the form of a research review and a summary of the skills and techniques acquired.

HESC3611**Clinical Movement Studies**

School of Medical Sciences

UOC6 HPW6

Prerequisites: ANAT3131, ANAT3141, SESC2451

This course focuses on the quantitative assessment of human movement. Techniques, skills, and knowledge to assess both normal and pathological human motion will be covered. The clinical applications of human motion assessment will also be examined. The course will extend student's knowledge of biomechanics and musculoskeletal functional anatomy acquired in SESC2451.

HESC4501**Research Methods in Physical Activity**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC3521

This course builds on the information that was covered in HESC1501 Introductory Exercise Science. The student receives more advanced training in statistical software such as SPSS and learns to administer statistical tests such as regression, between and repeated analysis of variance, and multivariate analysis of variance. The student will also develop a research proposal during the course.

HESC4511**Practicum A**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC3521

Students are required to complete 80 hours of work experience with an approved organisation under the supervision of the practicum coordinator. Course availability: it is intended that students will complete this placement over semester 1. The student chooses, after consultation and academic advice, to undertake a structured internship in a relevant professional area. This is done under the supervision of an accredited exercise physiologist with industry experience. The supervisor will ensure adequate records of activities and skills developed by the student. The course requires the submission of a substantial internship report, a completed lab book, and a seminar presentation.

HESC4521**Practicum B**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC4511

See description for Practicum A. The student may take the internship in a different or related professional area to that of Practicum A. The same requirements apply in terms of a completed log book, a substantial report, and seminar presentation.

HESC4531**Movement Rehabilitation A**

School of Medical Sciences

UOC6 HPW6

Prerequisites: ANAT3131, ANAT3141, SESC2451, HESC3571

This course describes the use of exercise as a clinical rehabilitative tool for humans with neurological and muscular pathologies. The course delivers information about evaluation of injury sites and the design and implementation of exercise-based rehabilitative techniques to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4541**Clinical Exercise Physiology A**

School of Medical Sciences

UOC6 HPW6

Prerequisites: HESC3521, HESC3531

This course describes the use of exercise as a clinical tool in the rehabilitation of humans with cardiovascular and pulmonary pathologies. The course delivers information about the design and implementation of exercise-based rehabilitative methods to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4551**Research Project**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC3521

This course incorporates an initial research literature review followed by the acquisition of a range of research skills and techniques in the student's chosen area. The student will both observe and practice data collection in the laboratory of their choice. A final report is to be written with a summary of the skills and techniques acquired.

HESC4560**Professional Practice**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC3521

The principles and practice of planning, staffing, financial management and information systems management with reference to exercise rehabilitation will be the focus of this course. Issues such as ethics, indemnity, and insurance will also be discussed.

HESC4571**Research Project**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC4501

A research proposal will have been developed in the course Research Methods in Physical Activity (HESC4501). In this course the student will implement the approved project in terms of reviewing the literature, applying the appropriate methods, accumulating results and analysing results through the appropriate statistics, discussing the results, and drawing conclusions. A report is to be written in the form of a scientific paper.

HESC4581**Clinical Exercise Physiology B**

School of Medical Sciences

UOC6 HPW6

Prerequisite: HESC4541

This course builds on material presented in HESC4541 Clinical Exercise Physiology A. The course elaborates the use of exercise as a clinical rehabilitative tool for humans with a spectrum of diseases and disabilities not examined in HESC4541. The course delivers more advanced information about design and implementation of exercise-based rehabilitative methods used to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4591**Neuromuscular Rehabilitation**

School of Medical Sciences

UOC6 HPW6

Prerequisites: HESC3571, HESC4531

This course provides the opportunity for students to understand the potential and limitations of exercise as a tool for clinical rehabilitation in humans with neurological pathologies. Specific information about a range of neuromuscular disorders is provided, and students are encouraged to apply their knowledge to case studies and realistic scenarios in order to develop the scientific and clinical attributes necessary to contribute effectively to a neuromuscular rehabilitation team. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4621**Movement Rehabilitation B**

School of Medical Sciences

UOC6 HPW6

Prerequisites: HESC4531

This course builds on material presented in HESC4531 Movement Rehabilitation A. The course describes specific rehabilitation techniques

that are used for treating a variety of injuries involving the shoulder, elbow, hand, wrist, groin, hip, thigh, knee, lower leg, ankle, foot, and the spine. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4631

Nutrients, Metabolism, and Exercise

School of Medical Sciences

UOC6 HPW6

Prerequisite: FOOD3330

This course will consider the relationship between nutrients, metabolism, and different types of exercise. The current literature on the influence of nutrition on pre-, during-, and post-exercise metabolism with a view to enhancing performance will be reviewed. Discussion will focus on the adjustment of nutrient requirements for age, gender, special needs, and environment (heat and altitude).

HIST1003

The Fatal Shore: Aborigines, Immigrants and Convict Society

School of History

UOC6 HPW3

Sex and violence pervaded early colonial society. Looks at the way violence was used to dispossess Aboriginal people from their land and to establish and maintain convict society. Examines the complex relationships arising from sexuality: sex as a form of currency, domination, negotiation and identity for both Aboriginal people and Europeans. What is the legacy of these brutal beginnings for modern Australia? Are we still marked by the convict stain? And how did the criminal system develop in Australia? Did early colonial Australia recreate the class, gender and ethnic inequalities of 18th and 19th century Britain? Also includes an excursion to a historic site in the Sydney region.

HIST1004

Making Australia 1850 - 1901: Land, People and Culture

School of History

UOC6 HPW3

The historical context for the making of modern Australia, 1850-1901. What was the 19th century experience of Aboriginal people? Where does the Republican Movement find its Australian origins? What do recent stereotypes of masculinity and femininity owe to our colonial past? How has history shaped definitions and expressions of sexuality? What are the origins of our current political system? Charts Australia's development from an isolated colony to an independent nation.

HIST1010

Introducing Southeast Asia

School of History

UOC6 HPW3

Excluded: ASIA1002

Introduces students to the history of the Southeast Asian region through a survey of the major eras from the classical civilisation of Angkor, Pagan and Borobudur up until the early twentieth century. Beginning with the religious and cultural traditions of Southeast Asia, kingship and power, pre-colonial society, colonial society and nationalist visions are explored. Analyses the ideas of nationalist figures like Jose Rizal and Sukarno, as well as peasant rebellions against colonialism and capitalism. The Philippines, Indonesia, Cambodia, Burma and Thailand receive particular attention.

HIST1011

The Emergence of Modern Europe (A)

School of History

UOC6 HPW3

The principal themes in the history of early modern Europe, concentrating on the 16th and 17th centuries. Topics may include modern trends such as the Renaissance, the Protestant Reformation, the Scientific Revolution, the emergence of towns and the centralised absolute state. Discussion may also include the history of climate, disease and population change and their relationship with the environment; social and religious conflicts; and the lives and beliefs of 'ordinary people' in the period, such as witchcraft. For details of topics covered in current year contact the School of History.

HIST1012

The Emergence of Modern Europe (B)

School of History

UOC6 HPW3

Investigates major themes in the history of early modern Europe during the 17th and 18th centuries. Topics may include the consolidation of 'absolute' monarchies, the intellectual challenges of the Scientific Revolution and the Enlightenment, the emergence of a more literate and secular society, the lives and beliefs of 'ordinary people', and the prospects for reform of the 'Old Regime' in the late 18th century.

HIST1014

Enter the Dragons: Continuity & Change in East Asia

School of History

UOC6 HPW3

An introduction to the societies and cultures of East Asia. Special consideration will be given to early contacts with Europe, responses to intervention and modernisation and the links between traditional cultures and patterns of historical change into the twentieth century. The course is intended to provide a survey of major themes in East Asian history, preparatory to more specific study at upper level in the School of History.

HIST1015

The 60s: Australia and the United States

School of History

UOC6 HPW3

Examines the significance of the 1960s in Australian and American national life and explores the construction of the Sixties as an epoch in western history. After exploring the construction of the Sixties the course will examine a number of significant social and political themes which have characterised the period and compare and contrast the Australian and American experience. Themes include issues such as race and minorities, popular culture, civil protest, architecture, the war in Vietnam, student activism, the sexual revolution and the counter-culture. Concludes by examining the legacy of the Sixties for Australia and the United States.

HIST1016

World History: The Big Picture

School of History

UOC6 HPW3

Excluded: ASIA1000, HIST1017, INST1000, INST1100

Focuses on the basic features and forces which have shaped human history from the origins of civilisation to modern times. The first part of the course covers selected major civilisations (eg. Roman Empire, Han China) while the second covers transnational issues such as nomadism, trade between civilisations, disease and climate. The final part covers the origins and nature of modernity, to the 19th century.

HIST1020

Women, Gender & World History

School of History

UOC6 HPW3

Excluded: GLST1200, WOMS1003

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

HIST1021

World History: The Twentieth Century

School of History

UOC6 HPW3

Excluded: HIST1019, HIST2000, INST1004, INST1200, INST2000, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes empires, modernity, nationalism, fascism, decolonisation, communist revolutions, total war, genocide, the growth of the media, social movements, environment, 'Americanisation', and terror.

HIST1030

The Modern Jewish Experience: Emancipation to the Holocaust

School of History

UOC6 HPW3

Excluded: JWST1000

The progress towards emancipation of the Jews in the 18th and 19th centuries was driven not only by Enlightenment ideas of equality and tolerance, but also by highly pragmatic considerations. While initially, for the most part, enthusiastic objects of this process, European Jews grew increasingly aware of the conditions attached to it and of its real and potential dangers. Traces the history of emancipation, its achievements and failures, and the light it sheds on the development of European societies.

HIST1031

The Modern Jewish Experience: Nationalism and Statehood

School of History

UOC6 HPW3

Excluded: JWST1001

Explores the origins of modern Jewish nationalism, Zionism, in the mid-nineteenth century and charts its development through to the creation of the State of Israel in 1948. Discusses the influence of emancipation, nationalism, socialism and anti-semitism. Concludes by considering the debate on 'post-Zionism' and the challenges it may present for Israel and the Jewish Diaspora.

HIST2015

Women in the Modern World

School of History

UOC6 HPW3

Prerequisite: 36 units of credit

History of women in the Western world since the French and American Revolutions. Stress on relating the role and position of women to questions of social change over long periods. Topics include: changing family structures, sexual attitudes and practices, women's work, the role of women in feminist politics and reform movements, the position of women in contemporary Western society. Covers the United States, Europe and Australia.

HIST2016

Film in History

School of History

UOC6 HPW3

Prerequisite: 36 units of credit

Assesses the significance, for the discipline of History, of film as a major communications medium. Issues include: the industrial archaeology of the film; the political-economic history of the film; national and transnational film industries, the impact of film upon perceptions of the past, and its uses in teaching history; film as a primary historical source material (ie documentaries, pedagogic films, advertising commercials and propaganda films, and home movies); reading film texts from the standpoint of the historian.

HIST2019

Identity, Culture, Politics: Ireland and Australia in the 20th Century

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: IRSH2002

Examines the political, economic and social changes that took place in Ireland and Australia during the course of the 20th century as they became increasingly independent of Great Britain. Compares and contrasts developments in both countries in terms of national identity, constitutional arrangements with Great Britain, the impact of war, politics, economics and social issues.

HIST2025

Slavery and Freedom: American History 1750-1890

School of History

UOC6 HPW3

Prerequisite: 36 units of credit

A social history of the expansion and consolidation of the new Republic, with special attention to slavery, native Americans, the western frontier, Jacksonian democracy, reform, the Civil War and its aftermath. The central concern is how a social system based on physical coercion and paternalistic social relations came to be replaced by a free labour system based on principles of individual morality and self-restraint.

HIST2027

Inventing Australia: Race, Nation, Identity, 1901-1949

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2019

Examines the changing myths, ideas, visions, prejudices and debates through which Australians experienced themselves, others and the world during the first half of the twentieth century. Themes include the making of a White Australia, ideas of nationhood, invasion fears, the experience of Indigenous Australians, sex, disease, housewives, new forms of cinema, slums, cities and work.

HIST2028

Australia since World War 2

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2020

Major developments in Australian Society since World War II. Topics include: immigration, religion, culture, government, education, comparative welfare history, external relations, women's experiences, media studies, Aboriginal culture and politics, the impact of the Vietnam war, tough times and the 1980s, Australia and America, sporting culture and Olympism, television and the media, Australia and Asia, and the emergence of the new commercial and communication systems of 'the Information Age'.

HIST2041

Australian Sport: History and Culture

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2018

Urbanisation transformed the shape of sport and popular culture and created an industry of mass entertainment. Explores how and why this transition took place in 19th-century Australia and England and what it all meant in personal, familial, regional and national terms. Topics include: historiography of sport and mass culture; the leisure revolution in 18th-century Britain; the rise of organised sport and mass culture in Australia; and the social and political implications of new leisure institutions.

HIST2045

Modern America

School of History

UOC6 HPW3

Prerequisite: 36 units of credit

Analyses US history from the end of the Civil War to the reverberations of 9/11 from the perspective of politics, economics, culture, minorities, and foreign policy. Asks what America is and who the Americans are, and explains how this former colony acquired the status of hyperpower.

HIST2049

Working Lives: Historical Perspectives

School of History

UOC6 HPW3

Prerequisite: 36 units of credit

Explores the historically changing nature of work in relation to the individual and society. Uses theoretical literature to explore themes such as the development of the labour process, the relationship between work and ethnicity, the cultural and ideological dimensions of work, and the connections between changes in the workplace and broader labour movements. Unemployment, technological change and workers' responses are examined. The gendered nature of work is considered: the role of the household economy, the development of sexual divisions of labour and the forms of work specific to women's experience as well as the role of work in shaping men's identities. Students will visit museums and industrial sites. Draws on case studies from a broad range of countries, including Australia.

HIST2054

Modern Japan: Political Culture, Popular Culture

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2012

Concentrates on Japan from Meiji (1868 -1912) to the Fifteen-year War (1931-45), but includes the Allied Occupation, post-war popular culture, and the apparent 'successes' of Japan's modernisation; looks at imperial Japan not just through the eyes of its 'successful' leaders, but also through the eyes of Japanese who were marginalised in society or who actively resisted state authoritarianism. Weekly topics vary, ranging from the hegemonic imperialist ideology of emperor-centred paternalism, to social movements of opposition, to changing cultural (eg literary) forms.

HIST2055**Modern India**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2008

Examines the history of Modern India, and the controversies surrounding history in the subcontinent. Topics include the Mughal empire, the British Raj, the Indian Nationalist Movement, Mahatma Gandhi, Independence and the partition of India into the new nations of India and Pakistan, independent India and the effects of globalisation in South Asia. Themes include colonialism and its aftermath, resistance, gender and religious nationalism. Also engages with, and critiques, popular conceptions of India as it is represented in the West, and incorporates Indian popular culture, literature, film, sport and music to this end.

HIST2059**The Modern Olympics**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Examines the successful elevation of a small-scale European athletic event into a major world festival. Topics include: the invention of the modern Olympics; myth and ideology; politics, including the role and structure of the IOC; commercialisation; the impact of media, especially film and television; the bidding process; gender issues; and the impact of the Olympics on the environment, town planning, tourism and the economies of host cities.

HIST2060**(Un)Making the Third World: History & Global Development B**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2010, GLST2101, HIST2040, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

HIST2061**(Un)Making the Third World: History & Global Development A**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2020, GLST2102, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

HIST2074**Holocaust and Genocide in Historical Perspective**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: JWST2101

Introduces students to the field of genocide and Holocaust studies, beginning with competing definitions of genocide and moving to a detailed treatment of various cases of mass death in world history. The Holocaust as a paradigm case of genocide and the legal prosecution of genocide will be considered.

HIST2078**In the Firing Line: Australians go to War**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2008

Examines the importance of war in shaping Australia, from the colonial period to the engagement at Gallipoli and up until the outbreak of World War II. Considers war's contribution to definitions of nationality, ethnicity, citizenship, masculinity and femininity and the way war shaped Australia's place in Empire. Focuses on the battle zone and looks at the way that participants understood and represented the experience of war, drawing on literature and film, personal letters and diaries, reminiscences and oral interviews as well as official records.

Note/s: Includes a field trip to the Australian War Memorial in Canberra.

HIST2090**The Transformations of Warfare**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT0309

Ranging from ancient Roman warriors to Vietnamese guerillas and Islamic suicide bombers, examines the evolution of warfare in terms of the nature of troops, tactics, and technology. Considers wars not only as the greatest cataclysms in history, but also as fundamental catalysts of change. Emphasises how society has impacted warfare and the other way around, exploring themes as varied as law, ethics, women, identity, interracial relations, and warfare's collateral damage and its consequences for civilians and the environment.

HIST2201**The Medieval World**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

The Middle Ages is among the most dynamic and formative phases in world history. Deals mainly with Europe and the Mediterranean world from Late Antiquity through to the Renaissance, and covers topics such as the 'fall' of Rome, the 'Barbarian West', Byzantium, Persia and Islam, the making of Latin Christendom, the Vikings, the Crusades, and Europe's cultural and intellectual revival from 1000 AD. Important themes include sex, gender, Christianity, Islam, heresy, state formation, feudalism, imperialism and warfare.

HIST2202**Born to the Purple: The Byzantine World (330-1453)**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK3505

Examines the Byzantine world, from its origins in the late antique world, through the Middle Ages, to its political and cultural legacy in the early modern world. Focuses on political, social and religious developments in the Byzantine state and church, the manner in which Byzantine culture received and redeployed its Classical heritage, and its place between the European, African and Asian worlds.

HIST2203**The Modern Greek World (1453 to Present Day)**

Modern Greek Studies
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GREK3506

Examines the contemporary culture of Greece and Cyprus within its historical context. Considers the meaning of events such as the fall of the Byzantine Empire in 1453, the effects of western rule and Ottoman domination, the influence of the European Renaissance and Enlightenment, the movement for independence, the Asia Minor catastrophe, the Nazi and Fascist occupation and the military dictatorship of 1967-74.

Note: This course is compulsory for students who wish to major in Modern Greek. Taught in Greek.

HIST2351**Chinese Civilisation, 1600 BC to 1600 AD**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Surveys Chinese civilisation from ancient times through to the Ming Dynasty. Topics include technology, ritual, and war-making in Shang (1600-1050 BC) and Zhou (1050-256 BC) periods; Chinese political thought; the establishment of a unified government under Confucian principles; influence of Buddhism on Chinese society; technological innovations in the Song period (960-1276); relations with northern barbarians and the Mongol conquest of China: commerce and culture under the Ming, and building the Great Wall.

HIST2352**Modern China, 1600-present**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2043, HIST2044

Covers the history of China from the foundation of the Manchu Qing Dynasty (1644-1912) through the Republican Era (1912-1949) and the era of Communist Party rule (1949-present). Topics include consolidation and empire-building under Manchu rule; internal rebellions and the growing menace of nineteenth century Western imperialism; the formation of a modern Republic and a Nationalist system of government (1912-49); the brutal and devastating war with Japan (1931-1945); and the foundation of a socialist government backed by the tide of rural revolution. Examines China's transformations under the leadership of Mao Zedong, Deng Xiaoping, and Jiang Zemin.

HIST2400**Concepts of Europe**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2000

Europe conquered, colonised and revolutionised the world despite being politically and culturally fragmented. Now, faced with the threat of decline, it seeks to overcome the fragmentation through the consolidation and expansion of the European Union, but different ideas about what a united Europe should be like continue to divide the participants in the European project. These differences have deep historical roots, as indeed does the European idea itself. They reflect the ambiguities of defining "Europe" between geographical boundaries, cultural identities, religious beliefs, political power, military security and economic interests, between local, regional, national and imperial loyalties. Traces the historical origins of the European idea, examines the various concepts of Europe used through the centuries and discusses their relevance to the contemporary difficulties of the European Union.

HIST2410**Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2410, IRSH2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de siècle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

HIST2482**Europe, 1914-1945: Dark Continent?**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2482, HIST2066, HIST2067

Explores examples of catastrophic wars and revolutionary upheavals, examines cases of ethnic-cleansing and genocide, and analyses the impact of ideologies on concepts of nation, race and gender. Themes include: Total War, Socialism, Fascism, Communism, Anarchism and the "New Woman". Case studies will include Hitler's Germany, Stalin's Russia, the Spanish Civil War, WWI & WWII, the Armenian genocide and the Holocaust.

HIST2483**Decadence, Dada & All That Jazz: European Cultural History, 1880-1945**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2483

Focuses on the major cultural expressions of European modernity and the way in which they reflected social and political transformation. Themes include: modernism's challenges to positivism, fin-de-siècle decadence, Freud and the rise of psychoanalysis, the roaring 20s, feminism, Surrealism, Cubism, Cabaret, Americanisation, Jazz, and cultural representations of WWI & WWII.

HIST2484**Europe in the Age of Revolutions**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Examines and assesses the most significant upheavals of the turbulent decades between the late-18th century and the mid-19th century. Topics may include: the French Revolution, Napoleonic Europe, innovations in agriculture, industry and communications, social transformations (population growth, urbanisation, ideas about 'classes'), cultural production (Romanticism, the periodical press), the expansion of state power, and conflicts over political representation (conservatism, nationalism, socialism, feminism).

HIST2485**The German-Jewish Experience**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2300, JWST2103, SOCA3310

The contribution of Jewish Germans to the social, political and cultural life of Germany and Austria from 1900 to 1933. The impact of attempted integration as reflected in the work of Herzl, Schnitzler, Kafka, Buber, Feuchtwanger, Scholem and others; the failure of the German-Jewish symbiosis as a basis for discussion of the concepts of assimilation, acculturation, ethnicity, identity and nationality.

HIST2489**The Attractions of Communism**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2311, SOCA3313

After the demise of the Soviet Empire, the 'totalitarianism thesis', which equates Fascism and Communism, has gained a new lease of life. Though there are many similarities in the political practices of these two movements which dominated the twentieth century, their aims and the groups they appealed to seem radically opposed. Seeks to explain the attractions of Communism through the study of documents, literary texts and film, and to shed light on the reasons for the loyalty of many European workers and intellectuals to 'the cause' despite their increasing awareness of its deformations in the Soviet Union and elsewhere.

HIST2491**Text Workshop A**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2201

A close analysis of short key texts in modern European history and culture, designed to develop students' close reading skills and to introduce them to important social, philosophical and theoretical questions through first hand encounters with the texts themselves.

HIST2510**The United States and Changing Global Orders**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2103, SPAN2431

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

HIST2511**The United States and Conflict in the Middle East**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Explores shifting American interests and policies in the Middle East - conceived as a broad and diverse region from Algeria to Afghanistan - from the early republic's conflict with 'Barbary' states to the clash with 'Rogue' states after 9/11. The emphasis is on the post-World War II era and major crises such as, among many others, the Arab-Israeli conflict.

HIST2662**Rome: From Kingdom to Republic**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Traces the rise of Rome from a small, unimportant city-state to the largest power in the Mediterranean world. Explores the political, social, and cultural development of Roman civilisation from the eighth century to the end of the Middle Republican period of 133 BCE. Examines how Rome as a state and as a people dealt with both internal conflict and external adversities. Asks how Rome overcame many of these problems and yet its pluralistic system of governance and of social organisation eventually started to fracture.

HIST2665**Early Greece: Bronze Age to Archaic Greece**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Explores the origins of Greek civilisation. Begins with a survey of the earliest eras before examining the island and mainland civilisations of the Aegean Bronze Age, the Greek 'Dark Age' following their collapse, and the 'Greek Renaissance' of the Archaic Era. Themes may include: historiography and archaeology; the political evolution of Greek states; trade, colonisation, and intercultural relationships; Panhellenism and the evolution of Greek identity; the evolution of social structures (such as the practice of slavery, the status of women, the composition and role of the aristocracy); culture, art, philosophy and the uniqueness of the 'Greek experiment'.

HIST2666**The Expansion of Greece: Classical to Roman Greece**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Examines the dynamic, diverse, and troubled society of Classical Greece's polis civilisation, the failure of the polis and the rise of the kingdom of Macedon. Studies Greek interaction with non-Greeks in the Hellenistic kingdoms following the aftermath of Alexander's conquests. Investigates the decline of these kingdoms, and traces how Greece became a prosperous backwater of the Roman Empire. Themes include the origins and evolution of Greek institutions, long-term changes in economic and social structures, and Greek interaction with the outside world.

HIST2751**Nightlife and the Metropolis: Moulin Rouge to Rave**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Traces the unfolding of a global culture of nightlife in the twentieth century, thus providing a window into modern urban cultural history. Examines how nightlife spaces created new forms of sociability, fashionability, sexuality, and identity for modern urbanites. Other influences on the growth and spread of nightlife include imperialism, colonialism, and war; advances in media technologies such as radio, film, television, and recording; and the role of criminal organisations and narcotics in building modern nightlife industries. Emphasises East Asian cities such as Tokyo and Shanghai.

HIST2752**Religion in World History**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit

Uses pilgrimage and travel as a device to examine the role of religion in world history, focusing on the politicized nature of religions, the role of religion in people's lives, and recent manifestations of religious experience. Topics include: Jerusalem; medieval and modern Marian devotion (the Coogee Madonna); Haj; the adoption of pilgrimage as resistance against colonial or totalizing regimes in India and Tibet; religion as protest (Malcolm X); New Religious Movements; 'civic religion' (travel to Ground Zero), pilgrimage to Gallipoli; travel to places associated with iconic people (Diana, Elvis); backpacking and New Age travel and virtual pilgrimage.

HIST2760**A History of Sexualities**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: WOMS2003

Begins with Classical Greece and establishes some important themes concerning gender, sex and culture which will be traced through the intervention of colonisation, Christianity, and the development of social sciences from the 18th century; traces the relationship between sexuality and socio-political control in the 19th and 20th centuries; investigates the shaping of sexualities through art, literature, cinema and media as well as pornography; and looks beyond the infamy of Lesbos, Mary Magdalen, the Marquis de Sade, Oscar Wilde, Margaret Mead, and Monica Lewinsky, amongst others, to uncover a rich history of the west.

HIST3101**Understanding Nazi Germany: Origins, Structures, Explanations**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit and 12 units of credit at the HIST2000 level; Excluded: HIST2422, EURO2331

Explores debates over the origins and role of Nazi Germany. Issues will include its roots in German history; the driving force of the regime; Hitler's role and Nazi Germany's war aims. Sixty years after its defeat in World War II, Nazi Germany continues to fascinate and to leave questions hotly debated by historians. Discusses whether the Nazis were modernisers or backward-looking romantics, and why there was so little opposition. Considers Nazi Germany's war aims and if the Holocaust was the inevitable outcome of Nazi ideology or a bureaucratic response to impending defeat. These issues will be explored in lectures and student-led seminar discussions of primary and secondary texts.

HIST3102**Premodern Japan: Status, Sex and Power**

School of History
UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level; Excluded: HIST2076

A thematic treatment of Japanese history from ancient state formation to the Meiji Restoration of 1868, this course covers a variety of cultural and political topics. Features a particular emphasis upon cultural heterogeneity differences and tensions between the different status groups: aristocrats, samurai, clerics, peasants, merchants - and also upon gender constructs and sexuality/s. Students are encouraged to reflect upon issues of historiography such as: the pitfalls of linear narrative histories; how the Japanese past has been constructed by scholars and to what ends; and the extent to which interpretations of the past are the products of our present.

HIST3103**Urban Legends: The History of Sydney**

School of History
UOC6 HPW3

Prerequisite: 36 units of credit and 12 units of credit at the HIST2000 level; Excluded: HIST2100, AUST2022, AUST3103

Explores Sydney's dramatic transformation from a tiny preindustrial penal settlement to a sprawling city of over four million people by examining the interplay of natural, cultural and spatial histories in the broader context of urban history and historiography. Themes include Sydney's environmental, Aboriginal, immigrant and gendered histories, 'slums' and suburbs, communities and sub-cultures, heritage and modernity, sex and food, the creation and impact of urban images.

Note: Includes excursions to key historic Sydney areas.

HIST3106**Environmental History**

School of History
UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level; Excluded: HIST2039

A global perspective on our modern environmental condition and its development, primarily in Europe, the US and Australia, since pre-industrial times. Topics include: human impacts and natural changes in climate, the forests and the oceans; changing concepts of the natural world; economics and environmental damage; the impact of population growth and the industrial revolution; imperialism and its ecological effects on indigenous peoples; modern conservation and environmental movements.

HIST3108**The Mediterranean in History: From Odysseus to Club Med**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level

Navigates the Mediterranean world from the time of Homer through to the advent of package tours, and examines whether there is such a thing as Mediterranean history. Topics include: The Odyssey, Greeks and Phoenicians, Roman cults, saint worship, the Jewish diaspora, and the broad impact of Venice, the Crusades, Islam and the Corsairs. Pays particular attention to the modern period, with special reference to multi-ethnic port cities (eg. Salonica, Alexandria and Haifa), banditry, rural poverty and revolt, Mediterranean fascism, popular religion and mass tourism.

HIST3109**Barbarians, Peasants & Vampires: Eastern Europe in History & Imagination**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level; Excluded: EURO3001

Examines imaginative representations of East European peoples through history, drawing on evidence from visual images, travel writing, and chronicles. Clarifies the connections between history, mythology, demonisation and romanticism in West European depictions of 'the East', and Eastern self-representation.

HIST3111**The Ages of Homer**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level

Explores the societies reflected in the Homeric poems, drawing upon documentary and material evidence from the Late Bronze Age to the early Archaic Period. In addition to the history and archaeology of Greece and Anatolia from ca. 1300-700 BC, topics include the collapse of complex civilisations in the Late Bronze Age Mediterranean and the onset of a 'dark age', the nature of oral tradition, the historicity of political, social, and cultural arrangements described in the poem, the emergence of state-level societies, colonisation, and long-distance trade in the Aegean, and the origins of Panhellenism.

HIST3900**Historiography of Southeast Asia**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better; Excluded: HIST3008

Gives students practice in the discipline of history. Students will: conduct literature searches, comparing use of reference guides and computer searches; write review articles of scholarly literature on a prescribed topic; study the art of the book review; analyse general histories to establish changes in topic, focus, perspective; and review fiction as a source for historians. Students should gain an understanding of the production of knowledge and practice writing and oral communication. No prior knowledge of Southeast Asia necessary.

HIST3902**Australian History and its Constructions**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Deals with various questions, themes and debates which have shaped current perceptions of the past and the evolution of historical literature in the Australian national context. Special attention is paid to the problems of attempting history in a national perspective and representative examples of colonial, as well as early and more recent Australian historiography. Also deals with individualism and the recent new historiography including feminist perspectives and the globalisation of ideas and topics which include the role of libraries and similar institutions and the Internet, film and memory, postmodernism and the killing of history.

HIST3904**Going Public: Public History and the Historian**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Public history - the practice of history outside academia - is a conduit between academic history and the wider community. Explores the many ways public history is understood, practised and applied and its dynamic (often subversive) potential to question standard historical narratives. Offers practical information on working as a historian and gives students experience in primary research and writing for diverse audiences. Topics include: heritage and environmental campaigns, conservation and redevelopment projects, museums, and popular history.

HIST3905**Evidence and Interpretation: Controversies in European History**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

From the famous controversy between E H Carr and Geoffrey Elton, sparked by Carr's 'What is History?' half a century ago, to the more recent 'postmodernism' debate, historians have been sharply divided over such key issues in historiography as the relative importance of empirical evidence, theories, moral values, and narrative subjectivity. Explores these issues through both the major writings of the key protagonists in these debates, and case studies of three of the most celebrated 'wars of interpretation' in European history: the English Civil War, the French Revolution, and the rise of Nazism in Germany.

HIST3907**Clio's Craft: Writing Feminist Histories**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Examines the theory and practice of feminist history, comprising histories of women, gender and sexualities. Emphasises changing approaches to feminist history inspired by different sorts of feminist theory - recently, for example, by sexual difference ('French') feminism and postcolonial feminism.

HIST3912**Researching and Writing History**

School of History

UOC6 HPW3

Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

A seminar and workshop series in which students are introduced to a variety of research methods, sources and styles of writing, e.g. biography, oral history, family history, use of land titles, newspapers, parliamentary papers, official and private archives. Students will receive hands-on experience in dealing with primary sources and visit major archives in Sydney and Canberra.

HIST4000**History Honours (Research) Full-Time**

School of History

UOC24 HPW5

Prerequisite: 54 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the School and to complete two fourth year seminar courses. At least one of these must be taken in the first session of enrolment. For details consult the School.

HIST4050**History Honours (Research) Part-Time**

School of History

UOC12 HPW3

Prerequisite: 54 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the School and to complete two fourth year seminar courses. For details consult the School.

HIST4500**Combined History Honours (Research) Full-Time**

School of History
UOC12 HPW2

Prerequisite: 48 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

This program is undertaken in two schools, eg History and Politics and International Relations, History and German Studies. Students are required to complete a research and seminar program acceptable to both schools.

HIST4550**Combined History Honours (Research) Part-Time**

School of History
UOC6 HPW2

Prerequisite: 48 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

This program is undertaken in two schools, eg History and Politics and International Relations, History and German Studies. Students are required to complete a research and seminar program acceptable to both schools.

HPSC1100**Cosmos and Culture**

School of History and Philosophy of Science
UOC6 HPW3

Excluded: HPST1107, HPST1109

Examines the history and philosophy of science (including medicine) from antiquity to the twentieth century. Places special emphasis on contextual factors (social, political and cultural) and the role of technologies in the development of science. Topics include: Greek and Hellenistic natural philosophy; science in Late Antiquity; Medieval science; the Copernican Revolution; mechanical philosophy; the telescope and microscope; Newtonianism and the Enlightenment; natural history; Romanticism and the Counter-Enlightenment; the Darwinian Revolution; laboratory medicine; chemistry and industrial research; the twentieth-century physics revolutions and their impact on philosophy of science; the atomic bomb and Big Science.

HPSC1200**Science Good, Bad and Bogus**

School of History and Philosophy of Science
UOC6 HPW3

Excluded: HPST1003, HPST1108

What is science? What are its distinctive characteristics as a form of inquiry? Why are astrology, 'creationism' or parapsychology widely considered to be pseudosciences? A critical consideration of such inquiries raises central questions concerning the nature of science, involving issues such as the nature of observation and evidence, theories and laws, explanation and prediction, etc. Issues to be considered include the 'Galileo Affair', 'science vs. religion' and relativism. These are placed in an historical context from the Ancient Greeks to twentieth-century philosophers. Also considered are the nature of scientific revolutions and 'postmodern' approaches to science.

HPSC1400**Science, Technology, Society and Environment**

School of History and Philosophy of Science
UOC6 HPW3

Excluded: SCTS1001, SCTS1106, SCOM1011

Examines the relations of science and technology with societies in the modern world. The status and authority of science. Can science tell us what we ought to do? Critiques of science. Is technology applied science? What is the relation between technology and social change? The political uses of expertise. Experts and the rest of us. Issues of participation. These topics will be explored theoretically and by reference to case studies including: modern genetics and its use in agriculture and medicine; information technology, computers and cyberspace; energy technologies, nuclear and solar; technologies of everyday life.

HPSC1500**Understanding Environmental Controversy**

School of History and Philosophy of Science
UOC6 HPW3

Excluded: SCTS1002, SCTS1107

Examines the nature of global and local environmental problems with particular emphasis on understanding controversies about environmental

risk. Patterns of population and consumption, production and waste; what constitutes an environmental problem?; risk and risk perception; environmentalism; the uses of knowledge, science and environmental controversy; international attacks on global problems; stakeholders and stances; environmental problems in your backyard; local and global action. In the last seven weeks students will participate in group projects examining particular environmental risk controversies.

HPSC2150**Darwin & the Order of Nature**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPST2107

Examines ideas about the natural order (that is, about the ecology and classification of living things), from the 18th century to the present era, in cultural and political context. Retraces the West's quest for an explanation of living creation in terms of life forces and their interaction with a changing Earth, a quest which ultimately arrived at Darwin's theory of evolution. Also examines the major historical developments that set the stage for these scientific developments in an age of dramatic political and economic revolution, and at the ongoing impacts of the Darwinian world-view.

HPSC2200**Philosophy of Science**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPST2011, HPST2116

An examination of central issues in the philosophy of science. Introduces students to the nature and scope of the discipline, and through the examination of central issues prepares students to undertake work not only on the issues examined, but also across the discipline more broadly. Issues include: scientific method; inductivism and deductivism; scientific progress; explanation; causality; confirmation and evidence; values; scientific realism.

HPSC2300**Sociology of Science and Technology: How Science Works**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SCTS2002, SCTS2107

Examines contrasting accounts of how science works as a system of knowledge production, as a social system, and as a basis for manipulating the world through technology. Is science insulated from social and technological processes or integrated with them? Approaches include: Mertonian normative sociology; sociology of scientific knowledge; Latourian actor-network theory; symbolic interactionism and pragmatist sociology of science. Provides understanding of: the objectivity of scientific knowledge; the relationship between science and technology; the role of science in handling environmental problems; the communication of scientific knowledge to wider business, governmental and community constituencies and their understanding of it.

HPSC2500**Environment, Technology and Politics**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SCTS2118

Provides historical, social and political background for understanding the 'social crisis of the environment' - often blamed on the technological systems of 'Western Industrialised Society'. Also examines alternative visions such as 'Deep Ecology', 'Ecofeminism', and 'Ecological Democracy'. Key developments of thought and action in Western society are related to present day environmental politics. Topics include: pre-industrial developments in Europe; the ideas of the Enlightenment; changing images of nature; ecological impacts of industrialisation; globalisation; and public participation. Examples are drawn from the politics of energy systems, the relationship between agriculture and civilisation, and the politics of waste.

HPSC2550**Sustainable Development, Globalisation and the Third World**

School of History and Philosophy of Science
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2050, INST2401, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national

and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

HPSC2600

Galileo, Science and Religion

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPST2139

Examines Galileo's scientific discoveries and his defence of Copernicanism against Aristotle and the Church. Also examines "the greatest scandal in Christendom" - the trial and condemnation of Galileo by the Catholic Church in 1633. Issues raised include the perennial conflict between science and religion as well as central issues in the history and philosophy of science. Students will view Jupiter's moons and the phases of Venus, first seen by Galileo, and they will participate in a "re-trial" of Galileo re-enacting the Roman Inquisition hearing.

HPSC2610

Computers, Brains and Minds

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENS5525, HPST2004

Introduction to contemporary discussions of the mind, thought, intelligence and consciousness. Focuses on the issues which arise in connection with the so-called 'cognitive sciences' - the disciplines which include such fields as neuro-science, psychology, linguistics, the philosophy of mind, and 'artificial intelligence'. Can computers think? Is the brain a machine?

HPSC2630

God, Life, the Universe and Everything: Science and Meaning

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPST2126

'Ultimate' questions about God, the meaning of life and the point of it all, have traditionally been the business of religion. Can science provide an answer to these questions, or is there always a realm of understanding which is beyond scientific knowledge? Examines philosophical issues in epistemology, metaphysics and philosophy of science. Topics include arguments for the existence of God and the underlying questions of evidence and explanation in science.

HPSC2650

Worrying Ourselves to Death? Health, Risk & Modern Medicine

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HPST2138

Statistics suggest that populations of First World countries are healthier and longer-living than at any previous time. Ironically, the perception exists that we are 'doing better but feeling worse'. How did we become the 'worried well'? Departing from traditional positivist and progressivist approaches in medical history, this course provides a framework for examining some of the practices and paradoxes of modern medicine. We ask why the forces that created modern medical 'miracles' have also created the current climate of anxiety and ambivalence. Why has the maintenance of health become a perpetual exercise in risk assessment?

HPSC2660

Cheating Death: A History of Medicine

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENS5522, GENT0902, HPST2003, HPST2128

What was the Medieval attitude to the bubonic plague? How has the doctor/patient relationship changed through time? In what ways has society reacted to new diseases such as AIDS? The answers to these questions, and many more, will be discussed in this course, which looks at the changes in Western medical theory and practice from the earliest recorded times to the present day. No previous biological knowledge is required for this examination of issues of health and disease in their historical and social contexts.

HPSC2665

On Drugs: Pharmaceuticals, Medicine, and Culture

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit

Drugs are powerful forces of change, rapidly reshaping medical care, lifestyles and even nations. Examines the 'life cycles' of successful medicines developed in the past century, from sex hormones to amphetamines to the latest genetically engineered protein drugs. Considers how the pharmaceutical industry creates new drugs, how marketing interacts with doctor and patient behavior, and how medicine, culture and politics are affected in the process. Applies general concepts regarding the way scientific and social change are connected to help understand drugs and their impact.

HPSC2881

Cultural Heritage Management

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI3003, SCTS3120

Over 40,000 years of human habitation has helped to shape Australia's environment. Examines the policies and processes of managing both Aboriginal and non-Aboriginal (historical/European) 'cultural heritage'. It will define the notion of 'cultural heritage' and examine to what extent the Australian environment may be defined as 'natural'. Identifies and examines the values attributed to cultural heritage items, sites and places by a variety of interest groups, and critically examines the legal, ethical and policy requirements which dictate management processes.

Note: Taught by Nura Gili (Indigenous Programs)

HPSC3100

Advanced History of Science

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit

Introduces students to key issues, methods and debates in the history of science by means of close examination of case studies of significant turning points in the development of Western science. Critical examination of primary sources will be stressed, along with the central historiographical debates concerning each case. Issues include: the Scientific Revolution of the 17th century; science and technology in the Enlightenment; life science and the sciences of the environment in the 19th and 20th Centuries.

HPSC3200

Topics in the Philosophy of Science

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit

Explores central issues in the philosophy of science at advanced level. Topics will be drawn from: scientific change; demarcation; rationality and objectivity; theory and observation; discovery; instrumentalism and realism; cognitive approaches to science; laws of nature; explanation, reduction and causality; underdetermination; justification and evaluation. Emphasis is placed on developing disciplinary skills required for higher level research in the field.

HPSC3300

Technology and Culture

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SCTS3900

Explores issues in the history, philosophy and sociology of technology at advanced level. Issues will be drawn from: technology and everyday life; technological determinism and change; ways of being with technology; the development of technological systems; the social construction of technology; actor-network theory; risk and trust; technology and gender; citizen participation and strategies for technological reform. Emphasis is placed on developing disciplinary skills and literacy required for higher level research in the field.

HPSC3500

Society & Environmental Process: Botany Bay

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: HPSC2500 or HPSC2550 or SCTS2118 or SCTS3106; Excluded: AUST2010, SCTS3013, SCTS3020, SCTS3126

Interprets the concept of the social construction of the environment in the specific context of Botany Bay and its region. Environmental issues are identified and examined in the light of historical, sociological, economic and political developments at the regional, national and global levels. Prospects and processes for intervention. In addition to other work, each student completes a substantial research report.

Note: In addition to the prerequisite listed, it is desirable that students have completed two other Upper Level courses listed in the Environmental Studies program.

HPSC3920

Reading Option

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: 36 units of credit

Students wishing to work in an area not covered by an existing course may apply to the School to take a reading option. Not more than one such course may be counted towards a degree. Approval of a program for a reading option will depend on its suitability, and the availability of a staff member to undertake supervision.

Note: Permission for enrolment in the reading option must be obtained from the Head of School.

HPSC4000

History and Philosophy of Science Honours (Research) Full-Time

School of History and Philosophy of Science

UOC24 HPW5

Prerequisite: 54 units of credit in HPSC at 65%

Candidates are required to present a thesis and complete coursework as approved by the Head of School.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4050

History and Philosophy of Science Honours (Research) Part-Time

School of History and Philosophy of Science

UOC12 HPW3

Prerequisite: 54 units of credit in HPSC at 65%

Candidates are required to present a thesis and complete coursework as approved by the Head of School.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4200

History and Philosophy of Science Combined Honours (Research) Full-Time

School of History and Philosophy of Science

UOC12 HPW2

Prerequisite: 48 units of credit in HPSC at 65%

For Combined Honours, candidates are required to present a thesis and complete coursework as approved by the Heads of the two participating Schools.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4250

History and Philosophy of Science Combined Honours (Research) Part-Time

School of History and Philosophy of Science

UOC6 HPW2

Prerequisite: 48 units of credit in HPSC at 65%

For Combined Honours, candidates are required to present a thesis and complete coursework as approved by the Heads of the two participating Schools.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4500

Combined Honours (Research) in Environmental Studies Full-Time

School of History and Philosophy of Science

UOC12 HPW2

The course has three components: thesis (50%); seminar (25%); and either a second seminar, an internship or a project (25%). The project is intended to provide the opportunity for learning experience based on field research involving industry, government, or community activity, in a topic area

different from that of the thesis. It could take the form of a radio program, a short film, an environmental action plan or design, a community event, a developed policy proposal, a detailed funding program etc., or elements of several of the foregoing.

Note: Students must meet the following requirements: 1. Combined honours prerequisites in a discipline. 2. At least 48 units of credit from the interdisciplinary major in Environmental Studies, including HPSC2500/ SCTS2118 and HPSC3500/SCTS3126, with an average of Credit or better. 3. Permission of the Honours Committee of the Environmental Studies Committee.

HPSC4510

Environmental Studies Honours (Research) Full-Time

School of History and Philosophy of Science

UOC24 HPW5

Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project.

Note: Students must meet the following requirements: At least 54 units of credit from the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one Fundamental Knowledge course, and may include only two of the Level 1 courses recommended above.

HPSC4520

Environmental Studies Honours (Research) Part-Time

School of History and Philosophy of Science

UOC12 HPW3

Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project.

Note: Students must meet the following requirements: At least 54 units of credit from the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one Fundamental Knowledge course, and may include only two of the Level 1 courses recommended above.

HPSC4550

Combined Honours (Research) in Environmental Studies Part-Time

School of History and Philosophy of Science

UOC6 HPW2

The course has three components: thesis (50%); seminar (25%); and either a second seminar, an internship or a project (25%). The project is intended to provide the opportunity for learning experience based on field research involving industry, government, or community activity, in a topic area different from that of the thesis. It could take the form of a radio program, a short film, an environmental action plan or design, a community event, a developed policy proposal, a detailed funding program etc., or elements of several of the foregoing.

Note: Students must meet the following requirements: 1. Combined honours prerequisites in a discipline. 2. At least 48 units of credit from the interdisciplinary major in Environmental Studies, including HPSC2500/ SCTS2118 and HPSC3500/SCTS3126, with an average of Credit or better. 3. Permission of the Honours Committee of the Environmental Studies Committee.

IDES1012

Safe Workshop Practices

Industrial Design Program

UOC3 HPW2

This is a laboratory course for inducting students into the safe operation of hand tools, power tools, stationary machinery, and other equipment for the fabrication and finishing of industrial design models and prototypes. Instructional demonstrations of workshop techniques are followed by "hands-on" student exercises, using a wide variety of modelling materials, including timber, plastics, and metals. Successful completion of this course is required before students will be allowed to use the Industrial Design Laboratory for their design studio projects.

IDES1031

Industrial Design Studio 1

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES1101

This course aims to introduce students to the basic aspects of Industrial Design in order to develop an ability to solve problems of very low complexity, involving theoretical and project work to introduce design methodologies and their application to three dimensional design problems. At the same time, the course assists in the final decision at the end of year 1 that industrial design is the appropriate professional career choice for each individual student.

IDES1071

Materials and Technology Workshop A

Industrial Design Program

UOC6 HPW4

This course is designed to provide a platform of understanding of physics, mechanics and materials. Basic concepts of Energy transfer, Electrostatics and electromagnetism, Sound, Mechanics and Materials will be considered in the context of their applications to Industrial Design activity using a project-based approach.

IDES1101

Industrial Design Fundamentals

Industrial Design Program

UOC6 HPW4

This is a studio-based course that provides an introduction to design as fundamental to coherent thought and action in the industrial design discipline. Studies include: Basic elements of two and three-dimensional design, and the development of the analytical and communication skills necessary for their understanding. Development of the creative processes concerned with the exploration and manipulation of the elements of design. The course also takes account of exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental issues. Studio projects and assignments provide an introduction to a range of representation techniques used by designers to develop and communicate design ideas comprising: colour, freehand drawing, sketching, painting, mixed media and 3D model making.

IDES1121

History of Industrial Design

Industrial Design Program

UOC3 HPW2

This course is a chronological and focused study of the emergence and development of industrial design from 1800 to the present day. It includes products as an aspect of our culture/society/commerce/industry from 1750 to the present day and examines consumer products within the context of the changes taking place in industry and society.

IDES1161

Industrial Design Communication A

Industrial Design Program

UOC6 HPW4

This is a studio-based course providing an introduction to a range of methods used to accurately communicate 3-dimensional design ideas. Studies will focus on orthographic drawing with particular reference to the Australian Engineering Drawing Standard. This course includes practical assignment work using a range geometrical and mechanical drawing techniques. It will also include some experience in model making for industrial design

IDES1162

Industrial Design Communication B

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES1161

This course enables students to develop practical skill with the representation of 3-dimensional form using a variety of techniques including free hand drawing and formal pictorial drawing and an introduction to computer-aided techniques with particular reference to industrial design practice. The course will also include some 3-Dimensional model making.

IDES2072

Materials and Technology Workshop B

Industrial Design Program

UOC6 HPW3

Prerequisite: IDES1101

This course involves the investigation of the properties of engineering materials in the context of manufacturing technology and processes. The relationship between design practice and manufacturing processes is explored with particular reference to: strength and properties of materials,

basic metrology and tolerancing, forming and machining processes and joining systems. Metals and alloy materials and manufacturing processes: review of major processes, principles of process selection, design constraints and quality assurance, and advanced manufacturing technologies.

IDES2092

Industrial Design Theory and Process

Industrial Design Program

UOC6 HPW3

This course considers design thinking and clarifies the design process linking the stages with established design methodologies. In addition the nature of form is studied and reviewed against past and current theories. Included also is a consideration of the values associated with the visual language and the signals/tools that reinforce visual appreciation.

IDES2161

Industrial Design Studio 2A

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES1031

This course introduces students to design problems which require the application of the design process in order to arrive at creative and feasible solutions. The course is based around design projects as well as some critical review of design literature. The projects provide experience working with a restricted range of materials and manufacturing processes in the design and development of fully resolved product proposals. Students will be required to develop a good understanding of their own use of the design process. Skill development will emphasise the area of rapid exploration and communication of design ideas using a range of media.

IDES2162

Industrial Design Studio 2B

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES2161.

This course builds on the knowledge and skills introduced in Industrial Design Studio 2A in order to further students' understanding and command of the design process. The course is based around design projects as well as some critical review of design publications. Project work provides experience in investigating the requirements of particular groups of end-users and exploring the development of product form to meet these requirements. Students will develop skills in communicating highly resolved design concepts.

IDES2163

Industrial Design Communication C

Industrial Design Program

UOC6 HPW4

This is a studio-based course which reviews approaches to perspective drawing and development of rendering techniques with reference to their applications in product design. This course offers a particular focus on techniques for rapidly generating and communicating design ideas. Students will be exposed to a professional standard of design communications of this type and will work on project tasks using a range of media.

IDES2171

Computer Applications in Industrial Design

Industrial Design Program

UOC6 HPW3

This course is structured around practical computer lab classes which cover various aspects of computer modelling and documentation used in industrial design. The first phase of the course of aims to consolidate students' knowledge of 2-dimensional Computer aided drafting with reference to Engineering Drawing Standards. In the second phase students will gain experience using 3-dimensional surface modelling software to produce computer models of complex, curvilinear forms. Photo-realistic images of these forms will be generated using associated rendering/ray-tracing software. The application of these tools in the industrial design process will be considered.

IDES2201

Ergonomics

Industrial Design Program

UOC6 HPW3

This course introduces the physiological and psychological aspects of ergonomics/ human factors and their application to product use, work, environment effects and human/machine interface. The course aims to equip students to investigate human-use implications of their design activities with regard to issues such as usability, comfort, efficiency and safety. Project work and workshops will focus on human factors/ ergonomics principles and research methods and their application in Industrial Design and product development.

IDES3073**Materials and Technology Workshop C**

Industrial Design Program

UOC6 HPW3

Prerequisite: IDES1071

In this course, plastic materials and manufacturing processes are discussed together with the economics of production processes, design constraints, alternate design and manufacturing strategies and material properties and test procedures.

IDES3221**Industrial Design Studio 3A**

UOC6 HPW4

Prerequisite: IDES2162, IDES2163

Learning activities build up on work carried out in previous stages of the Industrial Design program, and are intended to increase students' understanding of the complexities of design practice. Projects allow students to gain further experience in applying research and design methodologies to solve problems of moderate complexity. Each undertaking has a strong emphasis on innovation, technical resolution and documentation to a professional standard. A rigorous and responsible approach to product design is fostered by working on projects with "real-world" social, environmental, commercial, technological or industrial constraints.

IDES3222**Industrial Design Studio 3B**

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES3221

This course develops the students' understanding of the design process in its application to complex product development problems. The course is based around design projects and will include the compilation, by each student, of a portfolio of design work completed in the Bachelor of Industrial Design program. Project work completed for this course will include the resolution of full design detail and will successfully address manufacturing and materials performance requirements tailored to particular markets and end-user needs. Design and communication skills will be at a level that would be acceptable in professional design practice.

IDES3231**Advanced Computer Aided Product Design**

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES2171

This course focuses on 3-dimensional modelling applications used in Computer Aided Design and Manufacture. The course is structured around practical computer lab classes in which students gain experience using parametric 3D modelling and visualisation tools. Project work involves modelling of complex, multi-component 3D forms and production of photo-realistic visuals. 3D computer modelling issues related to Materials and Manufacturing are also considered.

IDES4291**Industrial Design Studio 4**

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES3222.

Studies during this unit will be directed to prepare students to work as Industrial Design professionals. Each student is encouraged to direct his/her project program towards minimising any weaknesses that are evident in his/her knowledge and skills, or covering an area of design that they may not have worked in previously. Projects may be orientated towards specific interests that each student has developed in Industrial Design. Each student will finalise their folio during the year, therefore, this requirement should be kept in mind throughout the year when selecting and undertaking projects. The folio should aim at being of professional quality and range.

IDES4301**Project Research**

Industrial Design Program

UOC6 HPW4

Prerequisite: IDES2092, IDES3222, MARK1012

This course covers the research techniques applicable to products and product systems, covering problem identification, data gathering and analysis, and synthesis of information into a brief for future product design endeavours. The outcomes of IDES4301 form the basis for the IDES4351 Project in the subsequent semester. Project proposals for project research are often aligned with the research interests and activities of the program staff, which include studying the environmental, social, cultural, marketing, engineering, emotional, ergonomic and aesthetic aspects of industrial design. Surveys, focus group discussions, expert interviews, market research, and a comprehensive literature search constitute major activities in the course, with a strong emphasis on ethical research practices being fostered throughout.

IDES4311**Visual Communication Design and Corporate Identity**

Industrial Design Program

UOC3 HPW3

Prerequisite: IDES1031

This course covers the major graphic production processes, and their application in graphic design, including type and typesetting systems and involving graphic design projects.

IDES4321**Exhibition Design**

Industrial Design Program

UOC3 HPW2

Prerequisite: IDES2162.

This course focuses on understanding the nature of environmental space and spatial ambience, and the relationship of objects and products to the surrounding space. It involves exhibition design projects.

IDES4352**Industrial Design Project**

Industrial Design Program

UOC12 HPW4

Prerequisite: IDES4291, IDES4301

This is the student's final-year project, demonstrating the student's encompassing understanding of the product development process. This major design exercise is normally an application of the research findings in IDES4301. In this course, students attempt to explore the optimum solution to problems identified in the research, using various iterative techniques for concept generation, testing and development until the design is finally resolved. Outcomes of the project are displayed in a public exhibition.

IDES4372**Industrial Design Management and Practice**

Industrial Design Program

UOC6 HPW3

This course considers the problem of integrating innovative product design and development within the overall managerial, production and financial structure of industry. Australian and overseas case studies are given. Particular emphasis is placed on the development of appropriate design management structures and methods for the Australian situation that incorporates social ethics, consideration of sustainability and professional practice.

INDC2040**Physical Process Chemistry**

School of Chemical Engineering and Industrial Chemistry

UOC6 HPW6

Prerequisite: CHEM1021 or CHEM1041

Definitions of Classical thermodynamics. Pressure-Volume-temperature properties of industrially important fluids. Applications of thermochemistry in industry. Conversion of heat into work. Concept of lost work. Heat engines and refrigeration cycles. General properties of solutions. Maximum conversion of reactants in batch and flow reactors. Reactor design and chemical kinetics. Reaction rates in industrial batch and flow reactors. Electrochemical principles in the context of important industrial electrochemical processes. Properties and applications of electrolytes. Industrial electrochemical processes, electrodes and cells. Surface phenomena. An integrated laboratory incorporating experiments designed to demonstrate the basic principles covered in the lecture course.

INDC3051**Process Chemistry and Operation**

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: CEIC2110, INDC2040

Chemical aspects of high temperature materials; thermodynamics and kinetics of reactions in the solid state; phase equilibria in condensed systems; gas-solid and liquid-solid reactions. Selection of materials for chemical plant. Strength and corrosion resistance of less common materials of fabrication. Chemical and electrical aspects of corrosion and their application to corrosion problems encountered in the chemical process industries. Electrochemical kinetics. Design factors for corrosion prevention. Methods of corrosion prevention.

INDC3070**Instrumentation and Process Control 1**

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: MATH2021, CEIC2010, CEIC2020

Analog Computation: theory and application of basic analog computing elements; magnitude and time scaling; solution of linear differential equations. Instrumentation: theory and application of transducers and transmitters for measurement of process variables. Process Dynamics: behaviour of linear, lumped parameter dynamics systems; first, second and higher order and integrating systems. Process Control closed loop, block diagrams, controllers and controller tuning.

INDC3071**Process Control**

School of Chemical Engineering and Industrial Chemistry
UOC4

ENROLMENT REQUIRES SCHOOL APPROVAL

INDC3110**Industrial & Environmental Chemistry**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: CHEM2839, INDC2040

The qualitative aspects of major unit operations in the chemical process industries. Topics covered include gas absorption, liquid-liquid extraction, distillation, filtration, evaporation, centrifugation, drying and leaching operations, particle size reduction and enlargement. Students are required to attend factory inspections at local and country centres as required and to make a short oral presentation based on information gained during the factory visit.

Soil chemistry. Occupational diseases. Smogs and acid rain. Toxic elements and compounds. Toxic waste disposal. Industrial accidents. Atmospheric structure and chemistry. Greenhouse warming. The Ozone hole. Nuclear energy. Alternative energy sources. Water analysis. Air analysis. Occupational health.

INDC3120**Industrial Chemistry Practice**

School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Prerequisite: CHEM2839, INDC2040

The production of inorganic industrial chemicals from the standpoint of the application of the basic principles of inorganic and physical chemistry (acid industries, alkali industries, industrial gases electric furnace products, superphosphates, aluminum and glass); a study of some sections of the organic industrial chemical industry cellulose, industrial alcohols, formaldehyde, phenol, urea, phenolic and urea resins, acetic acid, polymers based on ethylene and acetylene, elastomers.

A small research project designed to illustrate practical applications of the principles of Industrial Chemistry. Regression analysis. Statistical design of experiments. Two level factorial designs. Screening experiments. Optimisation of process variables. Spread sheet and database utilisation. Basic programming. Industrial applications.

INDC4061**Process Design A**

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: 132 units of credit

This course will encompass the complete process design of a given (small) chemical plant. In Part A, students will be required to produce a design

report which will include plant sizing, process flow sheet, equipment selection and costing.

INDC4062**Process Design B**

School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4

Prerequisite: 132 units of credit

In Process Design B students will be required to produce an environmental impact statement, and a financial evaluation of the whole process. The report will also discuss the relevant thermodynamic and kinetic aspects of the process.

INDC4091**Research Project Theory**

School of Chemical Engineering and Industrial Chemistry
UOC12 HPW11

Prerequisite: 132 units of credit

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4092**Research Project - Practice**

School of Chemical Engineering and Industrial Chemistry
UOC12

Prerequisite: INDC4091

The experimental investigation of some aspect of an elected topic area in Industrial Chemistry.

INDC4093**Small Research Project Theory**

School of Chemical Engineering and Industrial Chemistry
UOC8

Prerequisite: 132 units of credit

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4094**Small Research Project Practice**

School of Chemical Engineering and Industrial Chemistry
UOC8

Prerequisite: INDC4093

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4120**Chemistry of the Industrial Environment**

School of Chemical Engineering and Industrial Chemistry
UOC3

Prerequisite: CHEM1011 or CHEM1031, CHEM1201 or CVEN1531

Soil chemistry. Occupational diseases. Smogs and acid rain. Toxic elements and compounds. Toxic waste disposal. Industrial accidents. Atmospheric structure and chemistry. Greenhouse warming. The Ozone hole. Nuclear energy. Alternative energy sources. Water analysis. Air analysis. Occupational health.

INDO1001**Introductory Indonesian 1**

Department of Chinese & Indonesian Studies
UOC6 HPW6

Excluded: GENT0428

An integrated program for beginners, which combines listening, speaking, reading and writing. Speaking and listening skills are emphasised through communicative activities in class. Students will learn some 750 vocabulary items, and will be able to communicate in practical situations across a wide range of topics.

Note: Excluded 2 or 3 Unit HSC Indonesian or equivalent or native speakers of Indonesian and Malay.

INDO1002**Introductory Indonesian 2**

Department of Chinese & Indonesian Studies
UOC6 HPW6

Prerequisite: INDO1001

Further consolidation and development of language skills acquired in INDO1001.

Note: Excluded 2 or 3 Unit HSC Indonesian or equivalent or native speakers of Indonesian or Malay.

INDO2001

Intermediate Indonesian 1

Department of Chinese & Indonesian Studies

UOC6 HPW5

Prerequisite: INDO1002

Extensive development of skills already acquired in listening, speaking, reading and writing. The course places special emphasis on communicative activities in class. Students will be expected to develop their preferred skills in areas of their own personal interest and future careers.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO2002

Intermediate Indonesian 2

Department of Chinese & Indonesian Studies

UOC6 HPW5

Prerequisite: INDO2001

Further development and consolidation of communicative skills and broad knowledge of contemporary Indonesian society.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3001

Advanced Indonesian 1

Department of Chinese & Indonesian Studies

UOC6 HPW4

Prerequisite: INDO2002

Advanced learning in the Indonesian language, with special emphasis on professional communication skills, and the analytical discussion of aspects of Australian and Indonesian societies eg cultures of the main islands of the archipelago, technology, trade and Australian-Indonesian relations.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3002

Advanced Indonesian 2

Department of Chinese & Indonesian Studies

UOC6 HPW4

Prerequisite: INDO3001

Extends and consolidates advanced learning in the Indonesian language, with emphasis on professional skills and analytical discussion. High level speaking and listening skills are combined with advanced reading and writing.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3035

Indonesian Popular Culture

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: INDO1102 or INDO2002

This course builds on students' general proficiency in Indonesian language to examine various aspects of contemporary Indonesian culture. Topics include: popular drama and literature, youth culture, popular music, media, fashion, film and the impact of globalisation. Authentic Indonesian language video, audio and textual materials are used.

Note: Open to native speakers.

INDO3500

Contemporary Indonesian Society

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: INDO1102 or INDO2002

The course is taught in Indonesian, and is based on discussion of important issues in modern Indonesian society. Involves the examination of major 20th century Indonesian thinkers. Themes include: nationalism, Islam, East and West, Marxism, the role of students, women, the press.

Note: Open to native speakers.

INDO3502

Islam in Indonesia

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Investigates Islamisation in Indonesia and the role of Islam in Indonesian politics and society. Themes include Islam and art, Islam and politics,

Islam and women. Students will gain a broader understanding of Islam in general, and the past and likely future of Islam in Indonesia in particular.

INDO3503

Indonesian Political Culture

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Examines the building blocks and processes of Indonesia's political culture, where geography, history, ideologies, interests, ethnic and national identities coincide and compete. Considers the role of poor peasants, labour and the military. Case studies are used for analysis.

INDO3900

Introduction to Indonesian Studies

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit overall, including 6 units of credit in INDO at credit level or better

Introduces a range of issues in Indonesian Studies, including insider and outsider views, shifts of emphasis in themes and explanations, linguistic issues, and major topics of history, politics, economy, regional cultures, law, literature and language. Includes critical readings of key Indonesian texts, as well as providing a broad overview of current work in the area.

INDO3901

Indonesian Studies Research Methods

Department of Chinese & Indonesian Studies

UOC6 HPW3

Prerequisite: 36 units of credit overall, including 12 units of credit in INDO at credit level or better

Critical readings of Indonesian and English texts raising key issues in analysing Indonesian society and language; questions, themes and debates which have shaped current perceptions of Indonesia; tools and methods for conducting research in Indonesian Studies.

INDO4000

Indonesian Honours Research Full-Time

Department of Chinese & Indonesian Studies

UOC24 HPW5

Prerequisite: 54 units of credit in INDO with an average of 70%

For Honours (Research) candidates are required to present a thesis of 15,000-20,000 words and complete two seminars as approved by the Head of the Department.

INDO4050

Indonesian Honours Research Part-Time

Department of Chinese & Indonesian Studies

UOC12 HPW3

Prerequisite: 54 units of credit in INDO with an average of 70%

For Honours (Research) candidates are required to present a thesis of 15,000-20,000 words and complete two seminars as approved by the Head of the Department.

INDO4500

Combined Indonesian Honours Full-Time

Department of Chinese & Indonesian Studies

UOC12 HPW2

Prerequisite: 48 units of credit in INDO with an average of 70%

Students are required to present a 15,000 - 20,000 word thesis and complete seminars as approved by the Heads of the participating Schools/Departments.

INDO4550

Combined Indonesian Honours Part-Time

Department of Chinese & Indonesian Studies

UOC6 HPW2

Prerequisite: 48 units of credit in INDO with an average of 70%

Students must present a 15,000 - 20,000 word thesis and attend seminars as approved by the Heads of both participating Schools/Departments.

INF51602

Computer Information Systems

School of Information Systems, Technology & Management

UOC6 HPW3

This course provides students with a basic understanding of the content of information systems; the types of information systems; the current roles of information systems in organisations; and the opportunities for and limitations of information systems within organisations and society. The course also provides an overview of the tools, techniques and frameworks used to analyse information systems; the range of Information Technologies used to support information systems and to explain their use; the alternative approaches for the development and implementation of information systems; the current technologies for the development of personal information systems and for information searches from a range of sources; and the ethical responsibilities of both the Information System professional and the private user of information.

INFS1603

Business Data Management

School of Information Systems, Technology & Management
UOC6 HPW3

This course provides an introduction to the concepts, design techniques and technology for the storage and management of data. Students gain the required knowledge and practical skills to model data including the use of entity/relationship models and object models; design simple databases in an organisational environment; understand the role of data in business; and understand the quality assurance issues in collecting, storing and using data. Students acquire and exercise skills in a number of data modelling and design techniques as well as develop a simple system using Microsoft Access.

INFS1611

Requirements Engineering

School of Information Systems, Technology & Management
UOC3 HPW1.5

Currently enrolled in Program 3648 or 3651 or 3652 or 3653 or 3749;
Excluded: INFS2611

This course trains students how to define system requirements using rapid prototyping techniques. Requirements elicitation, analysis and traceability methods are addressed, with emphasis on the roles of user interface design and object-oriented techniques. Students receive hands-on experience with an automated design tool.

INFS2603

Systems Analysis and Design

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602 or INFS1611, INFS1603

This course examines system analysis and design: requirements analysis and specification; logical and physical design of business systems. More specifically, the object-oriented (OO) methodology and structured methodology (SDLC) are covered. Hands-on experience with CASE tools used by information systems practitioners is provided (ie MetaEdit and RationalRose).

INFS2607

Business Data Networks

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602 or INFS1611

This course provides students with an understanding of data communication and distributed data processing in a business environment; and an understanding of the management issues associated with telecommunication systems. Main topics include data communication concepts; computer networks; reference to international standards and common industry communications software packages; local/metropolitan/wide area networks; network management; telecommunications services; and data security.

INFS2609

Software Implementation

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602, INFS1603 or COMP1021 or COMP1721 or COMP2811

This course covers programming in the business context with a commercial object-oriented programming language; defining problems and designing structured programs to solve problems; use of data types, selection, iteration, functions, arrays and data structures in procedural programs; and the use of an interactive development environment.

INFS2611

Requirements Elicitation

School of Information Systems, Technology & Management
UOC3 HPW1.5

Prerequisite: INFS1602 Excluded: INFS1611

Students learn how to establish and verify user requirements for information systems; become familiar with the instruments for requirements definition and the criteria for requirements quality assessment; and refine analytical skills for the evaluation of customer needs.

INFS2691

Industrial Training 1

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602, INFS1603

A practical treatment of the characteristics of commercial information systems. Topics include analysis of an existing information system; development of overview documentation of the system; evaluation of the interface design; consideration of the role of security and control mechanisms.

Note: Available only in Program 3971.

INFS2791

Industrial Training A

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602, INFS1603

Students consider the practical treatment of commercial information systems in business. The topics include: analysis of an existing system in its organisational setting; evaluation of the interface design; consideration of organisational impact of the information system.

Note: Available only to BCom ISM Co-op students.

INFS3603

Business Intelligence Systems

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602 or INFS1611, INFS1603

This course examines the process of decision making and work group activity by professional and managerial people; the tools and techniques available in information technology to support these processes and when they can be advantageously used; some of the reasons why so many executive support systems do not achieve their intended objectives; and the cultural and organisational issues involved in the use of Information Technology tools and techniques.

INFS3604

Information Technology Management

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS2603

This course introduces the strategic and operational management issues involving information systems and software. Consideration is given to both quantitative and qualitative management techniques, including the practical application of tools and concepts for software project management, as well as material on software metrics and software quality. In addition, techniques are covered for strategic planning of information systems and ensuring business contribution.

INFS3605

Implementation Workshop

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS2603, INFS2609

Students implement an information systems project using a commercial object-oriented programming language in a workshop environment. Topics include advanced program design; computer aided software engineering techniques; a comparison of a range of programming languages; test data specification; implementation procedures; interfacing an application with a commercial database such as Oracle; the production of system documentation; and the production of quality software.

INFS3608

Advanced Database Systems

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602, INFS1603

This course provides students with an in-depth understanding of database application design and database management for large and small businesses; practical experience using formal database design methodologies in systems development; and an understanding of the technological issues of database systems in a modern IT infrastructure. The main topics include advanced modelling of business applications, database logical design, normalisation through decomposition and synthesis, physical design, concurrency, security, and transaction management issues, contemporary issues of object-oriented databases, advanced database applications, multimedia databases, data warehousing, data mining, OLAP, and client/server design on the Internet.

INFS3611**Design Workshop**

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS2603 and 96 units of credit

This course consists of a real-life systems development project, conducted in a workshop environment. It provides practical experience in the specification and design of commercial business systems. Requirements definitions, system specifications and logical designs are developed to a professional standard.

INFS3685**Electronic Commerce Management**

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS1602

This course has been designed to help students develop specific skills relating to the management and application of electronic commerce as well as an understanding of essential concepts and technologies. Topics include: types of electronic commerce; Internet and World Wide Web applications; security; payment systems; applications in the banking, retail and manufacturing industries; problems relating to implementations of electronic commerce; and essential concepts/technologies supporting electronic commerce.

INFS3692**Industrial Training 2**

School of Information Systems, Technology & Management
UOC12 HPW6

Prerequisite: INFS3605

An in-depth practical exposure to information systems development. Topics include the structure and management of the implementation teams; the roles of users and information staff in implementation; scheduling and control during implementation.

Note: Available only in Program 3971.

INFS3774**Information Systems Security**

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: INFS2603.

Information Systems Security is a rapidly evolving field with new technologies, models, methods and paradigms, emerging each year. Recent world events have also heightened public awareness of security issues. This means that people involved in information systems security are required to continually update their knowledge and awareness of developments.

This course aims to review concepts, theory, methodologies and techniques discussed in the IS security literature and current practice. You will undertake case study exercises using the University's computing facilities and laboratories to provide you with a better understanding of computerised security techniques used in practice.

A particular emphasis of this course is the development of your critical thinking/awareness skills in order to ensure they are able to contribute, in an informed and flexible way, to discussions during the course and later in your employment. You are encouraged to relate theory to practice, with particular emphasis on reflections on your own experiences.

INFS3792**Industrial Training B**

School of Information Systems, Technology & Management
UOC12 HPW6

Prerequisite: INFS2603

Students are provided with in-depth practical work in information systems analysis and design. Topics include: the management of requirements analysis and design activities; the roles of information system clients; managing the software process; managing and using technology.

Note: Available only to BCom ISM Co-op Students.

INFS4693**Industrial Training 3**

School of Information Systems, Technology & Management
UOC12 HPW6

In depth practical work in information systems analysis and design. Topics include the structure and management of analysis and design teams; the roles of users and Information Systems staff in analysis and design; scheduling and control during analysis and design.

Note: Available only in Program 3971.

INFS4793**Industrial Training C**

School of Information Systems, Technology & Management
UOC12 HPW6

Prerequisite: INFS3604

Students study, in-depth, the business process and its relationship with information systems. Consideration is given to the impact of the system on the organisation and the suitability of the system to the organisation's needs; planning and re-engineering the business; and writing a business project.

Note: Available only to BCom ISM Co-op Students.

INFS4795**Thesis Part A**

School of Information Systems, Technology & Management
UOC6

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Thesis A is undertaken in the first session of the Honours year. Students undertake directed research work in an approved area under the guidance of a member of the lecturing staff. This course represents the research literature section of the thesis.

Note: Available only to Year 4 Honours students.

INFS4796**Thesis Part B**

School of Information Systems, Technology & Management
UOC18

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Thesis B is undertaken in the second session of the Honours year. Students undertake directed research work in an approved area under the guidance of a member of the lecturing staff. This course represents the research literature section of the thesis.

Note: Available only to Year 4 Honours students.

INFS4805**Information Systems Auditing**

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Management of information systems audit and the evaluation of IT management. Analysis and review of internal controls in contemporary computer installations and applications. Use of basic and advanced information systems audit techniques and methodologies, including audit software, integrated test facility, and concurrent auditing techniques. Technology audit reviews of the audit requirements for such technologies as LANs, EDI, and expert systems. Legal and professional requirements and computer abuse/fraud auditing. Review of future IS audit techniques, methodologies, research and social implications.

INFS4810**Advanced Data Management**

School of Information Systems, Technology & Management
UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The principle and practice of data administration in a large organisation. Design, redesign and tuning of database. Distributed databases and database management systems, including reliability, security and integrity of the database.

INFS4811

Knowledge Management Systems and Technology

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The objective of this course is to provide the student with an understanding of the business of managing the generation, formulation, dissemination, retention, storage, measurement, application, distribution, archival and disposal of corporate knowledge. It considers various systems and technology supporting knowledge management. It also addresses knowledge discovery in databases and corporate data warehouses, by identifying understandable patterns in data.

INFS4848

Information Systems Project Management

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

An introduction to the central concepts and issues of project management and the practical benefits of project planning and management together with resource management. Practical sessions in project planning and the use of a computer based management tool. Additional topics include customer focus, lifecycle customisation, work packages, progress monitoring, risk evaluation, quality management, people skills, and negotiation skills. Case studies of and examples from software development projects will be used as illustrations.

INFS4853

Information Systems Management

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

This course aims to assist students to develop their knowledge and understanding of important issues involved in the management of information systems in organisations and their ability to critically analyse these issues. Management of information systems will be considered at strategic, tactical and operational levels. Particular emphasis will be given to the management of enterprise-wide and inter-organisational systems and planning for their strategic use. Students without knowledge of and experience in management or the use of IS in organisations, may wish to undertake Information Systems Project Management INFS4848/INFS5848 before enrolling in this course.

INFS4886

Research Topics in Information Systems 1

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The development of science. Alternative social science research methodologies - case study, normative, laboratory, field studies and field tests. The research process. Judgement in research. Statistical analysis of research data and interpretation of results. Writing the research report.

INFS4887

Research Topics in Information Systems 2

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The objective of this course is to enable the students of information systems research to carry out data analysis using statistical tools for empirical research. It examines both the theoretical aspects of scientific data and statistical analysis and introduces the student to a statistical data analysis package.

INFS4891

Decision Support Systems

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

This course covers issues in the design, development and implementation of systems designed to support decision-making tasks in organisations. The course reviews models of individual and organisational decision-making and provides an overview of a number of existing and emerging techniques that support decision-making, such as, management science, statistics, expert systems, artificial intelligence, group decision-support systems, data warehousing and data mining. Methodologies for the development and implementation of DSS applications are discussed. Case studies describing organisational experiences with DSS applications will be discussed.

INFS4893

Special Topic in Information Systems

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

A specially assigned project, program or set of readings relating to information systems research.

INFS4898

Project Seminar

School of Information Systems, Technology & Management

UOC6 HPW3

Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

INOV2100

The Innovation Process

Faculty of Science

UOC3

Currently enrolled in program 3451 Innovation Management

The course gives students a fundamental and practical introduction to the innovation and commercialisation processes of high technology industries.

Lecture material includes the psychology and strategies for creativity and idea generation, action, strategic and business planning, technical evaluations, benchmarking, market research, intellectual property, and R&D and business funding.

Workshops explore the innovation process in terms of the identification and evaluation of commercial opportunities. Case studies examine examples of successful and unsuccessful scientific innovation.

The course material is delivered by a team of university academics and expert industry professionals.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program. Coursework comprises 35 hours during Winter Session.

INOV2110

Business Start Up Skills

Faculty of Science

UOC3 HPW2

Currently enrolled in program 3451 Innovation Management

The course enables students to acquire the knowledge, skills and attitudes required to organise and operate a business.

Student companies are guided through all the stages of a concentrated business cycle, including: establishing the company organisational structure, electing an executive management team, researching, designing and producing goods or services to fill a profitable market niche in the community. The companies plan, develop and implement quality systems in the key management areas of finance, manufacturing, human resources and marketing. Each company is required to prepare a business plan and an annual report.

Throughout the course, students tackle typical issues and challenges which confront commercial operations and develop skills for decision making, negotiation, creativity, communication, teamwork and networking, leadership, responsibility and accountability, and financial management and planning.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV3100

Strategic Communication

Faculty of Science

UOC3

The course material provides a theoretical and practical instruction in evaluating, communicating and marketing technical information, ideas and opportunities to a variety of audiences. Workshops focus on the development of the student's interpersonal skills including oral presentations, persuasion, negotiation, networking, business ethics and leadership. Other areas covered include analysis of personality and audience types, risk perception, locus of control, negotiation of expert status, effective listening, enquiry and feedback strategies, and meeting facilitation.

Note: This course is available to students either enrolled in the Diploma in Innovation Management program or having school approval. Coursework comprises 35 hours in a one-week block towards the end of Summer session.

INOV3110

Technical Publications

Faculty of Science

UOC3 HPW2

Prerequisite: INOV2100 or INOV2101

Student teams work with academic mentors to prepare a scientific or technical report suitable for publication. Academic mentors provide data from their research findings, which have been previously documented in the form of research reports, patents and student theses.

Students are allocated projects based on their nominated preferences for potential papers offered from a range of bioscience disciplines. The academic mentor clearly defines the background and scope of the work to be written up and supplies all the relevant raw data and reports. The student drafts the entire content of the paper including the Abstract, Introduction, Materials and Methods, Results, Discussion and Conclusions, Bibliography and associated Tables and Figures.

Each student receives instruction and constructive criticism throughout the project from their academic mentor. At the end of the assignment, the student will be expected to be completely familiar with the scientific foundation and objectives of the work covered in the paper. Students gain experience in the complete publication process from initial identification of target journals through to the preparation and submission of the final draft report.

Note: The course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4001

The Bioentrepreneurial Process

Faculty of Science

UOC6

The course covers an introduction to accounting, economic and business principles with a focus on the special considerations and parameters particular to the entrepreneurial process involved in the establishment of science based businesses. Tutorials, workshops and assignments involve the interpretation and preparation of budgets, cost analyses, market projections, project evaluations and financial statements for models of both established and proposed businesses.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program. Coursework comprises 35 hours in a one-week block at the beginning of Summer session and performance of assignments throughout the Summer session.

INOV4101

Innovation in Practice A (6 Units of Credit)

Faculty of Science

UOC6

Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 4 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placements overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4201

Innovation in Practice B (12 Units of Credit)

Faculty of Science

UOC12

Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 8 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placements overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students will assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4301

Innovation in Practice C (18 Units of Credit)

Faculty of Science

UOC18

Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 12 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placement overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students will assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to student enrolled in the Diploma in Innovation Management program.

INST1100

World History A

School of History

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program; Excluded: ASIA1000, HIST1016, HIST1017, INST1000

Focuses on the basic features and forces which have shaped human history from the origins of civilisation to modern times. The first part of the course covers selected major civilisations (eg, Roman Empire, Han China) while the second covers transnational issues such as nomadism, trade between civilisations, disease and climate. The final part covers the origins and nature of modernity, to the 19th century.

INST1200

World History B

School of History

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program; Excluded: HIST1019, HIST1021, HIST2000, INST1004, INST2001, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes empires, modernity, nationalism, fascism, decolonisation, communist revolutions, total war, genocide, the growth of the media, social movements, environment, 'Americanisation', and terror.

INST1300

International Relations in the 20th Century

School of Politics and International Relations

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program; Excluded: INST1001, POLS1017

Traces the development of international relations and its major concepts and theories through key themes and events in international history over the past century. Examines ways in which international politics is viewed, and the events, forces, and trends that provide context and justification to these theories. Introduces the major theories of international relations, as well as developments such as the Cold War and the arms race, decolonisation and revolution, globalisation, and the rise of international organisations.

INST1400

International Relations: Continuity & Change

School of Politics and International Relations

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program; Excluded: INST1002, POLS1020, POLS2005

An introduction to world politics and its study by scholars of International Relations. The course is in three sections which deal respectively with the key actors in, the dynamics of, and issues currently facing, the system of international politics.

INST2200

Globalisation and Fragmentation

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: SOCA2103

Examines the effects of globalisation on peoples' lives in different parts of the world. Explores the impact of transnational flows of culture, goods, technology and power and their impact on local worlds. Explores concepts such as: globalised culture, identity, frontiers, diaspora, de-territorialisation, virtual communities, the commodification of health and bodies, the formation of global multicultural cities, globalised religion, the experience of war and destabilised states, risk and vulnerability, new forms of sociality, human rights as a global discourse and social futures.

INST2300

International Law: Power, Politics and Ideology

School of Politics and International Relations

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: POLS2037

International law is integral to the system of international politics. It is the medium through which states and other actors negotiate their positions on a vast array of subjects and via which politics has, over recent decades, undergone a process of globalisation. Introduces students to the alternative approaches to analysing the political role of international law and examines the role of international law in particular case study scenarios.

Note: No prior knowledge of law is assumed.

INST2302

International Security

International Studies Unit

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs and 36 units of credit; Excluded: GLST2106, POLS2048, POLS3023

Examines the concept and practice of security in international relations. Examines theories of security, before addressing central actors to the security project such as states, institutions and civil society forces. Then considers key issues for security in international politics, including traditional conflict; humanitarian crises; environmental change; population movements and terrorism.

INST2400

The Theory and Practice of Development

School of Social Science and Policy

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: COMD2000, GLST2104, POLS2023, SLSP2701

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant cases studies

of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

INST2401

Sustainable Development, Globalisation and the Third World

School of History and Philosophy of Science

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: COMD2050, HPSC2550, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

INST3101

Individual Study Program A

International Studies Unit

UOC24

An individual sessional program of study normally at an overseas institution as approved after consultation with the relevant coordinator.

INST3102

Individual Study Program B

International Studies Unit

UOC24

An individual sessional program of study normally at an overseas institution as approved after consultation with the relevant coordinator.

INST3300

Theorising International Political Economy

School of Politics and International Relations

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law program and 36 units of credit; Excluded: POLS3054

Introduces key perspectives and central issues in the study of international political economy. Establishes links between theories about the relationship of politics and economics, and the analysis of key structures and processes in the world economy. Explores the theories and concepts designed to investigate the expansion and globalisation of a world economy. Key substantive issues include state-firm relations, production, international trade, and monetary relations.

INST3301

Economic Growth, Technology and Structural Change

International Studies Unit

UOC6 HPW3

Prerequisite: Enrolment in International Studies or International Studies/Law programs, 36 units of credit; Excluded: ECON3109

The process of economic development is never smooth. It is associated with profound changes in the fundamental structure of economic society. The rate of growth and development varies substantially between different economies. The course seeks to explain the factors that determine how societies grow and develop, with special emphasis on the role of technology and finance. Various approaches will be examined, and attention will be paid to problems associated with growth, including those relating to equity and human rights issues.

INST3900

International Studies Advanced Seminar

International Studies Unit

UOC6 HPW3

Prerequisite: 96 units of credit and enrolment in International Studies or International Studies/Law program

Provides an opportunity for students to evaluate experiences and ideas gained abroad during the International Studies overseas study program in the light of recent scholarship in the field of International Studies. Particular attention will be given to debates over whether international change can be best understood through paradigms which emphasise the primacy of the state and interstate dynamics, or as evidence of newly

transforming processes often labelled as 'globalisation'. Explores these competing forces and the responses to them of governments, institutions and peoples.

INTA2101

Design Studio 1

Interior Architecture Program
UOC6 HPW5

Introduction to the principles of design and their application in studio-based learning exercises to two- and three-dimensional design. Explorations of many of the influences on design thinking and practice, including the philosophical, historical, social and environmental. Critical thinking and expression in different forms. Studio projects and assignments will attempt in particular to address issues raised in the Theory coursework and to apply skills learned in the Communications coursework. Core considerations: ideation - design as purposeful designation; the development and expression of design ideas in many modes; the role of the ideagram in ideation; the role of analysis in design.

INTA2102

Design Studio 2

Interior Architecture Program
UOC6 HPW5

An introduction to the design of space for human habitation. Design projects culminating in the design of a small-scale habitat. Core Considerations: ergonomics and anthropometrics; domestic scale construction systems; principles of structural stability; environmental and energy issues.

INTA2111

Theory 1

Interior Architecture Program
UOC3 HPW2

The study of the discipline of design, understood as designation for a purpose, demands an enquiry into the principles that govern its operation. A general theory of design process: aim, possibility, act and fulfilment. Each of these is investigated within the context of the human life that is to be served and the world order that forms the backdrop to the this life. The role of 'ideas' in design is discussed in relation to the process of analysis and synthesis that is fundamental to designing.

INTA2112

Theory 2

Interior Architecture Program
UOC3 HPW2

An introduction and exploration of the central theme of western European architectural design, modernism, as it emerges from practices such as philosophy, art and architecture, from the European Enlightenment until the late 20th century. Comparison is made between buildings that exhibit modern features and non-modern features to show that the discourse of modernism is more extensive and complex than architectural modernism.

INTA2121

History 1

Interior Architecture Program
UOC3 HPW1

An introduction to key aspects of Western architectural and design history, from Antiquity to the mid 19th century. Aspects of Chinese, Japanese and Southeast Asian architectural and design history will also be examined. Major themes, such as tradition and revival, will be explored within specific social, economic and political contexts. Their relevance to contemporary practice will also be considered.

INTA2122

History 2

Interior Architecture Program
UOC3 HPW1

An examination of the history of modern design from the mid 19th century to the mid 20th century. This will involve close study of the work of particular architects, interior designers and theorists. Issues to be considered include: design and technology, design and social morality, internationalism and universality and the 'total work of art'. Feminist and gender critiques of modern design will be discussed.

INTA2141

Communications 1

Interior Architecture Program
UOC6 HPW4

An introduction to the communication skills necessary in the study and practice of interior architecture. Students will develop capabilities in life drawing, freehand sketching, colour theory and the principles of perspective in a variety of techniques and media. These skills will be extended in a series of model making workshops using materials such as card, acrylics and timber. An introduction to the technology of computing and information technology as it pertains to the disciplines of the built environment. Topics include basic operation of a computer, information handling, networks and communications, computer graphics, CAD technology and computational processes.

INTA2142

Communications 2

Interior Architecture Program
UOC6 HPW4

An extension of fundamental presentation and communications skills established in Communications 1. Explorations of a variety of compositional modeling and media techniques will extend into discipline based specific drawing practices and presentation skills for the visual presentations of design based projects. A series of structured workshops will develop skills in freehand and technically constructed perspective, axonometric, isometric and rendering techniques. A component of computer based technical drawing skills is included. Workshops exploring skills for making oral presentations & practical research involving projects based around issues of universal design.

INTA2171

Technology 1

Interior Architecture Program
UOC6 HPW4

The course is divided into two distinct components - Ecological Sustainable Design and Structures. Ecological Sustainable Design : Introduction to the ecological and social issues facing society today with a particular focus on their relationship to the built environment. Particular focus on concepts of social responsibility, environmental accountability and ecological sustainability and their implications for the urban/built and natural environments. The Life Cycle Assessment (LCA) of materials, their use in the built environment as well as national and international case studies and their relationship to ESD will be examined. Structures: Understanding and examining how structures work without the need for mathematical formulas. The concept of forces, load transfer, strength, stability and stiffness will be examined. The course will outline key structural behaviour, concepts and focus upon basic structural elements and systems. The emphasis will be upon general principles and their graphical analysis using case studies throughout history to examine this further.

INTA2172

Technology 2

Interior Architecture Program
UOC6 HPW4

The course is an introduction to both the craft and the discipline of architectural drafting and to the principles of construction. There will be an introduction to constructional systems including small-scale timber structures, small-scale masonry construction with a brief analysis of constructional principles. A further study of structural elements, systems and materials with case studies will also be explored. The study will take place in parallel with a study of architectural drafting with emphasis upon the craft and discipline aspects of the practice. There will be an introduction to the Australian Standards dealing with the architectural drafting and to drawing conventions. Consideration will be given to sketching, measuring and documenting buildings. An exploration of the relationship between design and technology and the witness of actual building sites will also form part of this course.

INTA2201

Design Studio 3

Interior Architecture Program
UOC6 HPW5

Prerequisite: INTA2101, INTA2102.

Design projects centering on the design of small-scale interiors for relatively simple patterns of life. Core Considerations: exploration of the life-event as the origin of human aims in design; clarification of design aims; spatial ordering systems; inside/outside relationships; connections and transitions; the central idea - concept; formal presentation of the concept; ideas as ordering principles in design; translation of ideas into architectural space; natural and artificial lighting; construction detailing as a design activity.

INTA2202**Design Studio 4**

Interior Architecture Program

UOC6 HPW5

Prerequisite: INTA2101, INTA2102.

Design projects related to residential patterns of life. Core Considerations: public/private realms; home as hearth; dwelling; sense of place; appropriate materials in the domestic context; sustainability as a general principle; passive energy systems; construction detailing as a design activity.

INTA2211**Theory 3**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2111, INTA2112.

Theory of Form. The ontological and causal basis of the antinomial qualities of Form. An investigation of these qualities reflected in the natural world and in art and architecture through the ages. A critical appraisal of current thought and practice in design based on this investigation with a view to postulating improvements to design processes and outcomes that are judged to have shortcomings in relation to the theory of Form.

INTA2212**Theory 4**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2111, INTA2112.

In modernism and the critique of modernism there emerge a number of themes. Three of these themes will be briefly investigated in this course. These themes are technology, representation and feminism. The reason for addressing these three themes is that they comprise a common ground between architecture and other current concerns in a more general cultural sense, especially in politics. Each theme is accompanied by readings that offer a range of arguments among which students will apply critical discourse in order to establish their own critical orientation.

INTA2221**History 3**

Interior Architecture Program

UOC3 HPW1

Prerequisite: INTA2121, INTA2122.

An examination of the theory and practice of architecture and interior design in the late 20th century in relation to developments in visual culture generally. Issues to be explored include: design as polemic, design and youth, design and popular culture, design and fashion, design and the media. Postmodernist theory and production will provide primary contexts for discussion and debate.

INTA2222**History 4**

Interior Architecture Program

UOC3 HPW1

Prerequisite: INTA2121, INTA2122.

A detailed exploration of recent issues in design practice. This will involve close study of the work of particular interior architects and designers. Discussion will be based around three primary themes: public and private spaces; cross-disciplinary and intermedia approaches; cross-cultural interaction and self-determination. There will be a strong Australian emphasis, with guest lecturers providing specialist input.

INTA2241**Communications 3**

Interior Architecture Program

UOC3 HPW3

Prerequisite: INTA2141, INTA2142.

This course extends capabilities and techniques in visual presentation. Students will be encouraged to explore a variety of graphic, compositional and media techniques as an extension of design intent. Projects will provide opportunities to develop and refine individual skills in graphic presentation, layout, photography and Photoshop techniques.

INTA2271**Technology 3**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2171, INTA2172.

Materials and Detailing. Materials: Materials used within the built environment may be understood with reference to their manufacture, characteristics, ecology and the craft associated with their utilisation. The course will look at both soft and hard materials as the media of interior design. Time shall be given to the finishing aspects of materials. Detailing: The formal study of materials in lectures shall be put into practice in the studio with exercises dealing with the application and documentation of such materials within architecture and interior design. Studies shall look at detailing a small-scale building/interior with emphasis given to construction documentation. Witness to construction sites, manufacturing and various current Sydney designer works will also form part of this course.

INTA2272**Technology 4**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2171, INTA2172.

Materials and Detailing: An advanced study of the use of materials in structure, as finishes, the characteristics, ecology and craft associated with their utilization, including case studies of their application. A study of the joining, design and documentation of the detailing of materials for the interior will be thoroughly explored with examples and case studies. An advanced study of materials in lectures shall be put into practice in the studio with exercises dealing with the application and documentation of such materials within architecture and interior design. Studies shall look at detailing a small-scale building/interior with emphasis given to construction documentation, using either AutoCAD or hand drafted drawings. Witness to construction sites, manufacturing and various current Sydney designer works will also form part of this course.

INTA2301**Design Studio 5**

Interior Architecture Program

UOC6 HPW5

Prerequisite: INTA2201, INTA2202.

Design projects dealing with small to medium scale commercial, retail or public facilities. Core Considerations: materials and meaning in architecture; furniture and fittings; connections, junctions, mediating elements and tolerances; acoustics; building services, regulations and codes; access and egress; air conditioning and ventilation systems.

INTA2302**Design Studio 6**

Interior Architecture Program

UOC6 HPW5

Prerequisite: INTA2201, INTA2202.

Design projects dealing with medium to moderately-large scale commercial, retail or public facilities. Core Considerations: preparing finishes selections; incorporation of textiles into the design; preparing sample boards; space analysis and feasibility of facility and the user requirements; designing through the contract documents; budgeting.

INTA2371**Technology 5**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2271, INTA2272.

Lighting: Environment. Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Skills for predicting natural lighting implications and the design of a small lighting design. Acoustics: Acoustics and noise control, design of a room's basic shape and volume, acceptable ambient sound levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noises level, structure-borne and impact sound. Reverberation times, selection of building envelope elements, selection of interior building materials and elements and the design of small scale space in relation to acoustics.

INTA2372**Technology 6**

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2271, INTA2272.

Thermal Comfort and Advanced ESD: Integration of passive design strategies into buildings and understanding the concepts of human thermal comfort to integrate without mechanical heating and cooling. Skills for carrying

out a sun analysis. There will be an introduction to thermal evaluation and design tools, correlation and simulation models. Case studies of traditional and more technologically advanced built environments will be discussed. Building Services: Building services, regulations and standards: air-conditioning, plumbing, telecommunications, lighting, electrical and mechanical services. Implications for the design of interior space. Relationship to best practice principles of passive energy design and energy conservation. Fire protection systems and regulations. Working within the parameters of the Building Code of Australia, Standards Association of Australia standards and the requirements of other Statutory body pertaining to buildings in general and to interiors specifically.

INTA2382

Professional Practice 1

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2301.

This is the first of two consecutive courses in the BIA Practice Stream that aim to introduce Interior Architecture students to the principles of management and best practice. The practice notes and contracts used by the various professional bodies will be examined through lectures, tutorials and assignments. A thorough investigation into project management procedures, building authorities, project costing, estimating and specification to project successful project delivery. Allowance has been made for students to undertake between 280 and 490 hours of non-compulsory practical professional experience in approved employment between the two consecutive Professional Practice courses commencing at the end of Session 2, Year 3 and finishing by the beginning of Session 2, Year 4. Those who gain such experience may submit a 'certified logbook' (contact lecturer for details) of their work for consideration in the assessment of INTA2482 Professional Practice 2 where, at the discretion of the Head of Program the mark gained may be substituted for one of the assessable components of the course to a maximum value of 40% of the total mark for the course. This does not obviate the necessity for all students to complete all assessable components of this course.

INTA2401

Design Studio 7

Interior Architecture Program

UOC6 HPW5

Prerequisite: INTA2301, INTA2302.

Design projects dealing with medium to large-scale commercial facilities. Core Considerations: the design concept as an expression of a developed personal theoretical position on design; needs analysis and preparation of client briefs; innovation with technical and pragmatic programs; professional verbal presentation skills; best professional practice and quality assurance measures; health and safety issues; space planning and facilities planning and management; skills for designing to a budget.

INTA2402

Graduation Project

Interior Architecture Program

UOC15 HPW4

Prerequisite: INTA2401, INTA2441, INTA2411

An approved self-selected large-scale project carefully chosen and executed to demonstrate proficiency in every aspect of the program. The project, though hypothetical, must be based on a real situation with site, client and brief and be carried out under the guidance of an academic supervisor. A mentor scheme running concurrently will seek to align each student with a professional mentor to provide further guidance. The Graduation Project will be examined in a personal presentation made to a jury of professional designers and academics. The theoretical basis for the Graduation Project is established in the Dissertation a pricis of which is to form part of the final submission in this course.

INTA2411

Dissertation

Interior Architecture Program

UOC6 HPW3

Prerequisite: INTA2302.

The dissertation is to be a written work of scholarship of between 8,000 and 10,000 words that deals with the theoretical basis of the student's proposed Graduation Project to be undertaken in the final session of the program. It will demonstrate the student's ability to thoroughly research an approved topic and present a well-reasoned argument in support of a clearly stated hypothesis. It is to be completed before the commencement of the Graduation Project. A pricis of the dissertation will be submitted as part of the final presentation of the Graduation Project.

INTA2441

Project Research

Interior Architecture Program

UOC6 HPW3

Prerequisite: INTA2302.

This course is devoted to laying the foundations for the Graduation Project. It incorporates the development of the design brief; a typological study of relevant buildings and contexts, a thorough analysis of the site of the proposed project and a report on the context of the project and the impact of all regulations and standards. The whole is to be submitted in the form of a report.

INTA2482

Professional Practice 2

Interior Architecture Program

UOC3 HPW2

Prerequisite: INTA2382.

The course will examine practical and legal aspects of design practice, examining legal contracts, company structures, issues of professional indemnity, professional liability. The course will provide in depth discussions on professional ethics and code of conduct; methods of fee structure, advanced issues in the conditions of engagement, contract variations and general project administration systems; preparing fee proposals and marketing a design practice.

IRSH2002

Identity, Culture, Politics: Ireland and Australia in the 20th Century

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2019

Examines the political, economic and social changes that took place in Ireland and Australia during the course of the 20th century as they became increasingly independent of Great Britain. Compares and contrasts developments in both countries in terms of national identity, constitutional arrangements with Great Britain, the impact of war, politics, economics and social issues.

IRSH2012

Contemporary Irish Literature

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL2340, ENGL3471

Critically examines the poetry and prose written by Irish writers after WWII in terms of issues of identity, nationality, gender, landscape, language, tradition, and religion. Considers how Irish poets have coped with the legacy of Yeats, Irish novelists with the legacy of Joyce and what their writing tells us about present-day Ireland and the contemporary world.

IRSH2021

Contemporary Theatre

Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: THST2161

Studies recent developments in theatre and drama, in various countries, over the last 40 years.

IRSH2101

Ireland: States of Being, States of Mind

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit

Investigates key aspects of Ireland's social, political and cultural transformation from being subject to the British Empire, and thus a major source-country for the settlement of Australia, to becoming a wealthy, technologically advanced, highly educated and culturally sophisticated member of the European Community.

IRSH2104

Poetry, Virtue, Corruption: Milton to Burns

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL2104

Studies how English, Irish, and Scottish poets from 1660-1800 define themselves in relation to a culture which they deem to be corrupt. Moves from Milton as the single just man in a society that has betrayed the godly revolution to the poet as libertine in Rochester and Behn, and the poet as political propagandist in Dryden. Sees how Finch, Swift, Pope, Wortley-

Montague, and Johnson detach themselves and poetry from political life. Later poets show that once you do this, what is left are passion, death, superstition, madness, and small animals.

IRSH2410

Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2410 and HIST2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de siècle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

IRSH3472

Modernism - Joyce

School of English

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ENGL2453, ENGL3320, ENGL3472

Intensive study of James Joyce's 'Ulysses' to enquire into selected aspects of modernism. Of particular interest will be the writer's negotiations with language and with structure, the function of history and/or myth, the role of the comic, and the tensions between innovation and various forms of tradition.

ITAL1001

Introductory Italian 1

School of Modern Language Studies

UOC6 HPW5

Excluded: GENT0429

Introduces the main structures of Italian language and provides an overview of contemporary Italian history and society. The language component develops all four language skills, with a particular focus on the development of grammatical accuracy. The cultural component consists of a series of lectures which offer insights into some of the salient issues of Italian history from Unification to the present.

Note: Students who have taken HSC Italian and students who have any formal training from another source should apply to enrol as Cross Institutional students at the University of Sydney. Excluded: Students qualified to enter a higher level course.

ITAL1002

Introductory Italian 2

School of Modern Language Studies

UOC6 HPW5

Prerequisite: ITAL1001

Builds on the structures acquired in ITAL1001. The cultural component explores aspects of twentieth-century Italian cultural, social and political life through weekly lectures that examine major literary and cultural movements and figures, followed by a guided reading and analysis of texts in weekly seminars.

JAPN1000

Japanese Communication 1A

Department of Japanese & Korean Studies

UOC6 HPW6

Excluded: GENT0430

Introduces some of the basics of modern Japanese through listening, speaking, and reading activities. Covers five broad themes including introducing oneself, talking about university experiences, housing, Japanese geography, and daily routines. Hiragana and katakana are also introduced. Communicating in socio-culturally appropriate ways are stressed throughout the course.

JAPN1001

Japanese Communication 1B

Department of Japanese & Korean Studies

UOC6 HPW6

Prerequisite: JAPN1000

Introduces more of the basics of modern Japanese through listening, speaking, reading, and writing activities. Covers several broad themes including daily routines, talking about likes and dislikes, how to go

shopping, food, and family. 90 kanji are introduced. Communicating in socio-culturally appropriate ways are stressed throughout the course.

JAPN2000

Japanese Communication 2A

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN1001

Further development of beginners' Japanese interactive skills. Prepares students to become competent in anticipated Australia - Japan contact situations and basic survival situations in Japan. Continued emphasis on oral-aural skill acquisition. Approximately 100 new kanji are introduced.

JAPN2001

Japanese Communication 2B

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN2000

Consolidation of oral-aural skills up to intermediate level. Development of reading and writing skills, with another 150 kanji introduced.

JAPN2500

Introduction to Japanese Studies

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: JAPN3900

Examines Japanese society, culture, politics, and economy. Key themes include: the structure and transformation of Japan's political system; gender; popular culture; social movements and protest; identity; economic growth and its costs; and social, political, and economic transformation and stagnation in post-bubble Japan.

JAPN2510

Japan and Korea: Cultures in Conflict

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Examines in comparative perspective cultural changes in Korea and Japan in the late 19th to early 20th centuries. Focus given to how Japan's response to these changes was interpreted by Koreans and how they in turn attempted to respond to the actions of the Japanese. Special attention given to the relationship between the purposes of Japanese cultural reform in Korea and Korean 'cultural nationalism' in its mature form.

JAPN2600

Hospitality Japanese

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN2000; Excluded: JAPN4000, JAPN3400, JAPN3401, JAPN37** range of courses

Aims to develop interactive competence in spoken Japanese for the hospitality industry, particularly in professional situations relating to tourism and leisure. Includes finance and banking, hotel, advertising, restaurant and other work situations. Emphasises comparative cultural aspects, covering honorifics and etiquette as well as non-linguistic aspects of interaction between hospitality personnel and tourists.

Note: A formal dinner is a compulsory component of the course and will incur a personal cost.

JAPN2700

Talking Japanese Pop Culture

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN2001 or higher

Explores contemporary Japanese culture including Manga, Anime, films, theatre, and J-pop songs. The course combines the studies of culture and language through selected texts, tapes, videos and other materials, and field trips when possible. Different levels of language proficiency are catered for by options in assignments.

JAPN2701

Learning Japanese by Reading Manga

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: Available to students who have completed at least Japanese 2A. Not available to students who have completed Japanese 4A or higher; Excluded: JAPN37** range of courses

Investigates the vocabulary, grammar and kanji using manga as the primary resource. Socio-cultural aspects of each manga are also studied. Includes reading out loud, the creation of an original manga narrative, and specific language based assignments.

JAPN3000**Japanese Communication 3A**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN2001

Equips students with solid linguistic skills at intermediate level, with increasing emphasis on reading and writing. Introduction to a variety of local Australia-Japan contact situations and expanding practical usage of students' interactive skills. Approximately 200 new kanji are introduced.

JAPN3001**Japanese Communication 3B**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN3000

Further development of communicative skills and competence attained in JAPN3000. Students use Japanese in a wider context, thereby increasing vocabulary and knowledge of grammatical structures. Another 200 kanji are introduced.

JAPN3205**Business Japanese**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN2001; Excluded: JAPN3500, JAPN37** range of courses

Concentrates on interactive skills for business situations, including reading and writing. Introduction to technical language of accounting, finance, economics and marketing and develops skills needed in typical formal and informal business contact situations, such as business introductions and meetings, business conversation, written channels of communication and business etiquette.

JAPN3300**Discover Japanese Grammar A**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN2001

The grammar of modern Japanese will be introduced systematically as interrelated choices Japanese language users make in order to exchange meaning in the context of social communication. Provides students who already have an intermediate to advanced knowledge of Japanese with an opportunity to (re)discover the workings of the grammar of Japanese. A wide variety of natural spoken and written text examples will be used holistically in order to illustrate various features of the grammatical system of Japanese.

Note: Instruction will be given mainly in Japanese but also in English.

JAPN3400**Japanese Communication 4A**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN3001; Excluded: JAPN4000

Concentrates on acquisition of late-intermediate to early-advanced interactive skills in Japanese with continued emphasis on reading and writing. Introduction to basic linguistic features of advanced level Japanese and provides opportunities to practise skills needed in typical formal and informal Australia-Japan contact situations. Approximately 150 Kanji are introduced.

JAPN3401**Japanese Communication 4B**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: JAPN3400 or JAPN4000; Excluded: JAPN4001

Prepares students in acquisition of well-rounded linguistic and communicative competence necessary for advanced learners. Further extension and systematic practice of interactive skills. Another 150 Kanji are introduced.

JAPN3601**Cultural Studies and Japan**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Critically explores how popular culture, leisure and consumption are inter-related with identity construction in Japan, as well as how social and cultural ideologies, beliefs and values are produced, reproduced, challenged and changed within the fields of popular culture. Also examines the globalisation of Japanese popular culture both inside and outside of Japan and discusses how this relates to such issues as cultural imperialism, cultural hybridity, transnationality and diaspora.

JAPN3702**Politeness in Interaction with (the) Japanese**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN3401 or JAPN4001

Focuses on improving performance in politeness in interaction with Japanese. Deals with the range of theoretical approaches to politeness. Explores the ways in which participants in Contact Situations negotiate and manage the levels and expressions of politeness as scenes develop in the situation.

JAPN3703**Approaches to Japanese Discourse Analysis**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN3000

Introduces specific features of Japanese discourse and how they are socio-culturally interpreted. Presents a variety of approaches to Japanese discourse analysis through an application of the structures and strategies of Japanese discourse to daily communication in Japanese.

JAPN3900**Introduction to Japanese Studies (Advanced)**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 uoc in Level 1 including 6 uoc in JAPN at Distinction level; Excluded: JAPN2500

An in-depth examination into Japanese society, culture, politics, economy, and language. Explores topics ranging from Japan's political and economic system to popular culture, consumer society, gender, and globalisation. Emphasis is given to a critical examination of these issues within a multidisciplinary analytical framework.

JAPN3901**Introduction to Research in Japanese Studies**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN2001 plus a Distinction average in JAPN courses

Provides students with a framework for analysing problems in the field of Japanese Studies, including a theoretical framework and types and sources of problems. Where possible, students carry out empirical data collection and are guided through the analysis of and search for possible solutions to these problems.

JAPN3902**Readings in Japanese Studies (Advanced)**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: JAPN3000 or higher plus a Distinction average in JAPN courses

Students read Japanese and English writings in selected fields of Japanese Studies. Students intending to enter the Honours program read extensively in the area of their research fields. They develop ability to read academic writings proficiently and critically, acquire comprehensive understanding of the fields and produce an annotated bibliography of their reading.

JAPN4500**Japanese Studies Honours (Research)**

Department of Japanese & Korean Studies

UOC24 HPW5

Prerequisite: 54 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 English words or 32,000 - 40,000 Japanese characters in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be recognised as having completed the Japanese Studies Advanced Program.

JAPN4550

Combined Japanese Studies Honours (Research)

Department of Japanese & Korean Studies

UOC12 HPW3

Prerequisite: 48 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be regarded as having completed the Japanese Studies Advanced Program.

JAPN4555

Japanese Honours (Research) Part Time

Department of Japanese & Korean Studies

UOC12 HPW2

Prerequisite: 54 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 English words or 32,000 - 40,000 Japanese characters in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be recognised as having completed the Japanese Studies Advanced Program.

JWST1000

The Modern Jewish Experience: Emancipation to the Holocaust

School of History

UOC6 HPW3

Excluded: HIST1030

The progress towards emancipation of the Jews in the 18th and 19th centuries was driven not only by Enlightenment ideas of equality and tolerance, but also by highly pragmatic considerations. While initially, for the most part, enthusiastic objects of this process, European Jews grew increasingly aware of the conditions attached to it and of its real and potential dangers. Traces the history of emancipation, its achievements and failures, and the light it sheds on the development of European societies.

JWST1001

The Modern Jewish Experience: Nationalism and Statehood

School of History

UOC6 HPW3

Excluded: HIST1031

Explores the origins of modern Jewish nationalism, Zionism, in the mid-nineteenth century and charts its development through to the creation of the State of Israel in 1948. Discusses the influence of emancipation, nationalism, socialism and anti-semitism. Concludes by considering the debate on post-Zionism and the challenges it may present for Israel and the Jewish Diaspora.

JWST2101

Holocaust and Genocide in Historical Perspective

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2074

Introduces students to the field of genocide and Holocaust studies, beginning with competing definitions of genocide and moving to a detailed treatment of various cases of mass death in world history. The Holocaust as a paradigm case of genocide and the legal prosecution of genocide will be considered.

JWST2103

The German-Jewish Experience

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2300, HIST2485, SOCA3310

The contribution of 'Jewish Germans' to the social, political and cultural life of Germany and Austria from 1900 to 1933. The impact of attempted integration as reflected in the work of Herzl, Schnitzler, Kafka, Buber, Feuchtwanger, Scholem and others; the failure of the German-Jewish symbiosis as a basis for discussion of the concepts of assimilation, acculturation, ethnicity, identity and nationality.

KORE1000

Korean Communication 1A

Department of Japanese & Korean Studies

UOC6 HPW6

Excluded: GENT0431

Designed to provide beginners with practical language skills for effective communication. Emphasis is on use of the language in basic survival situations. Communicative methods are used to develop in students the four language skills: listening, speaking, reading and writing, within a cultural context. The Korean script, Han-geul, is taught progressively.

KORE1001

Korean Communication 1B

Department of Japanese & Korean Studies

UOC6 HPW6

Prerequisite: KORE1000

Further development of communicative skills in introductory Korean, with emphasis on a variety of real life situations. New communicative functions, vocabulary and grammatical structures are progressively added to knowledge and skills acquired in KORE1000.

KORE2000

Korean Communication 2A

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: KORE1001

Further development of communicative skills on the groundwork covered in introductory-level Korean. Allows students to build upon their spoken and written language skills, enabling them to interact in a wider range of communicative situations.

KORE2001

Korean Communication 2B

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: KORE2000

Consolidates and further expands knowledge and skills developed in the previous courses as well as laying the foundation for students who wish to proceed to a third year program. A number of selected Hanja, Sino-Korean characters, is introduced to further enhance the students skills to read and comprehend modern Korean mixed script.

KORE2500

Korean Civilisation and Culture

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: KORE3900

An introduction to Korean society, culture, politics and economy examined from historical perspectives. Topics include changes in social stratification, family life, role of women, education, religion, arts and popular culture, economy, technological development, role of governments, politics and diplomacy and inter-Korean relations.

KORE2601

Gender/Politics in Korean Literature

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Examines key Korean literary works and secondary critical writings in English which address the political implications of gender in Korean literature. Three primary questions to be addressed are the ways men and women have imagined their own and alternative worlds, how they have imagined each other, and how political events have shaped gender relations in Korean literature.

KORE3000**Korean Communication 3A**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: KORE2001

Consolidation of students communicative skills in both spoken and written Korean at intermediate level, with increasing emphasis on reading and writing. It introduces a wider range of communicative topics, vocabulary and grammatical structures and further expands practical usage of students knowledge and interactive skills. Approximately 100 new Hanja are also introduced.

KORE3001**Korean Communication 3B**

Department of Japanese & Korean Studies

UOC6 HPW5

Prerequisite: KORE3000

Further development of communicative skills attained in KORE3000 and a new orientation to specific needs in everyday business situations. It equips students with a variety of practical language skills and background information necessary not only for everyday conversation but also for Korean-Australian business situation. Includes systematic practice of communicative skills in the classroom and some field work at the real-life situations in the Sydney Korean business community. Another 150 Hanja are introduced.

KORE3400**Advanced Korean A**

Department of Japanese & Korean Studies

UOC6 HPW4

Integrated literary course: a variety of writing, including art, music, folktales, dialogues and everyday writing in all its forms is explored for language study. Familiarises students with different genres of Korean discourses and culturally rich texts. Designed for students who have acquired grammatical knowledge and need to enhance their vocabulary, reading and writing skills.

KORE3401**Advanced Korean B**

Department of Japanese & Korean Studies

UOC6 HPW4

Prerequisite: KORE3400; Excluded: KORE2101

Continuation of the work done in KORE3400. Designed for students who have acquired literacy skills but still need to develop their vocabulary learning and reading strategies. Focuses on the reading of authentic Korean texts by utilising various reading strategies. Includes participation in a variety of writing, such as song writing, poster creation and literature responses.

KORE3500**Professional Korean A**

Department of Japanese & Korean Studies

UOC6 HPW4

Introduces a repertoire of professional discourses along with reading-writing activities. Various genres are introduced, including social commentaries, art reviews, science reports, business documents and literature. Includes the study of the subtleties of grammar, idiomatic expressions and rhetorical structures.

KORE3501**Professional Korean B**

Department of Japanese & Korean Studies

UOC6 HPW4

Designed for students who need enriched language experiences to use their literary skills. Includes the reading of newspaper articles for intensive language study and participation in various writing tasks, such as descriptive, expressive, analytic and persuasive writing for class presentation.

KORE3600**Korean Translation A**

Department of Japanese & Korean Studies

UOC6 HPW3

Introduces translation theory and practice in Korean. Focuses on skills of translating English into Korean and provides native-speaker level students with foundations for professional translation. Examines techniques for analysing and rendering texts of different styles and complexity.

Addresses cross-linguistic and cross-cultural problems relevant to professional translation, including lexical/grammatical problems and ethical implications. Covers a range of authentic texts and a variety of topics including socio-cultural, educational, commercial, political, medical, etc.

KORE3601**Korean Translation B**

Department of Japanese & Korean Studies

UOC6 HPW3

Concentrates on more advanced authentic texts in key areas for professional translation such as public, academic and legal documents and excerpts from media. Includes practical skills and strategies relating to translators' examinations and professional practice.

KORE3900**Introduction to Korean Studies (Advanced)**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: 36 units of credit including 6 units of Korean at credit level; Excluded: KORE2500.

Introduces a wide range of topic areas in Korean Studies, such as history, politics, economics, business, society, culture, language and literature, with a particular focus on the rapid changes in the twentieth century and the strength and continuity of Korean culture. Also focuses on critical examination of research in these areas.

KORE3901**Topics in Korean Studies (Advanced)**

Department of Japanese & Korean Studies

UOC6 HPW3

Prerequisite: KORE2001 plus a credit average in all KORE courses

Critically examines a range of research work and familiarises students with the research tools and methods available for research in the field of Korean Studies. Covers various theoretical frameworks and empirical methods available for identification of problems, data collection and analysis, and interpretation of results. Designed primarily for intending Honours students.

KORE4000**Korean Studies Honours (Research) Full-Time**

Department of Japanese & Korean Studies

UOC24 HPW5

Prerequisite: 54 units of credit in Korean Studies, including KORE3900 and KORE3901, an overall WAM of 65 or higher, Distinction or higher in all KORE courses and the major with a minimum language level of KORE3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Korean Studies as well as compulsory language study.

KORE4050**Korean Studies Honours (Research) Part-Time**

Department of Japanese & Korean Studies

UOC12 HPW3

Prerequisite: 54 units of credit in Korean Studies, including KORE3900 and KORE3901, an overall WAM of 65 or higher, Distinction or higher in all KORE courses and the major with a minimum language level of KORE3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Korean Studies as well as compulsory language study.

LAND1101**Design Fundamentals: Studio 1**

Landscape Architecture Program

UOC9 HPW6

Introduction to design as fundamental to coherent thought and action in your discipline. Exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental precedent studies. Critical thinking and expression in different forms. Studio projects and assignments to develop skills and understanding of design elements and principles. Introduction to a basic vocabulary of representation techniques used by designers to facilitate the development and communication of design ideas including: colour, freehand drawing, sketching, painting, construction, mixed media, desktop publishing, photomontage techniques, technical drawing and drafting.

LAND1102**Landscape Design 2: Design Process**

Landscape Architecture Program

UOC6 HPW4

Prerequisite: LAND1101 Corequisite: LAND1142.

An introduction to site design and design process. A number of small-scale projects will allow exploration of design process through site planning, the use of historical precedent and design generation. Studio based projects will be supported by theoretical readings.

LAND1121**Introduction to Landscape Architecture**

Landscape Architecture Program

UOC3 HPW2

Introduction to the principles of design education. Overview of landscape architecture as a practice, as a profession and as an academic discipline. Study of contemporary landscape architecture as a design field and as a creative component of the environmental movement. Introduction to the art and technique of reading the landscape.

LAND1122**History of Landscape Architecture**

Landscape Architecture Program

UOC3 HPW2

Critical analysis of cultural landscapes through the investigation of philosophical, aesthetic and social aspects of landscape architecture and garden art in Eastern and Western traditions.

LAND1142**Design Communication**

Landscape Architecture Program

UOC3 HPW3

Prerequisite: BENV1141; Corequisite: LAND1102.

This course encourages students to develop a personal vocabulary of representation techniques to facilitate the development and communication of design ideas. Students develop a range of techniques including: perspective, freehand drawing and sketching, colour rendering, advanced creative drawing, the use of different media and graphic thinking.

LAND1151**Horticulture**

Landscape Architecture Program

UOC3 HPW3

This course introduces students to a botanical understanding of plants, their structure and function, taxonomic classification. The relationship between plants and their environments, habitats, communities and life cycle. Introduction to horticultural practice and plant identification.

LAND1152**Landscape Analysis**

Landscape Architecture Program

UOC9 HPW6

Prerequisite: GEOG1701, LAND1151

Observation and interpretation of both physical, biological and cultural environments and their interrelationships. Landscape character through sensory inputs and historical understanding. Fundamental characteristics of a range of biological systems, with emphasis on relationships with the physical environment. Survey of Australian plant communities and associated fauna with particular emphasis on the Sydney Region. Recording and presentation techniques associated with landscape surveys, field excursions.

LAND1171**Landscape Technology 1**

Landscape Architecture Program

UOC3 HPW3

Developing proficiency in site surveying and mapping techniques. Principles of grading and their application to a variety of site requirements and conditions. Land shaping, contour manipulation, drainage, earthworks.

LAND1201**Landscape Design 3: Site Planning**

Landscape Architecture Program

UOC9 HPW6

Prerequisite: LAND1152, LAND1102, LAND1171

Response to a specific site with a program of uses, in natural or urban settings. Emphasis is on gaining further skills in site design, effective communication of design concepts and integration of ecological issues with landscape design.

LAND1202**Landscape Design 4: Landform and Planting Design**

Landscape Architecture Program

UOC9 HPW6

Prerequisite: LAND1171, LAND1201, LAND1251

In this studio students undertake more sophisticated site research and analysis. They will develop an understanding of the relationship between natural systems, constructed environments and ecological sustainability. Focussing on planting and landform manipulation, students will explore techniques for developing and resolving design ideas.

LAND1221**Environmental Sociology for Landscape Architects**

Landscape Architecture Program

UOC3 HPW2

Students will be introduced to the study of people-place relationships and sociological techniques for understanding specific user-group requirements in the design of public spaces. Human perception of shared and personal space and the effect of environmental change on individuals and communities will be explored. Universal design and accessibility in design of public areas is also covered.

LAND1222**History and Theory Elective**

Landscape Architecture Program

UOC3 HPW6

Students are required to select one of the landscape electives listed in the History and Theory elective courses section. These include: BENV2218, BENV2219, BENV2220 and BENV2221.

Note: LAND1222 is not a course and should not appear on your enrolment.

LAND1251**Advanced Horticulture**

Landscape Architecture Program

UOC3 HPW2

Prerequisite: LAND1151

Based on the knowledge gained in Horticulture, this course will provide students with the horticultural theory and practice necessary for supporting landscape design and documentation.

LAND1271**Landscape Technology 2**

Landscape Architecture Program

UOC3 HPW3

Prerequisite: LAND1171, LAND1102

Description and selection of materials, their properties, origin and production. Understanding the relationship between materials and design. Use of Australian Standards. Construction principles and methods.

LAND1272**Landscape Technology 3**

Landscape Architecture Program

UOC3 HPW3

Prerequisite: LAND1271

Preparation of documentation for landscape works including: grading, drainage, earthworks, roads and pavements, planting and structures. Critical analysis of design development and documentation. Design a development of construction documentation and detailing for a wide range of materials, elements and structures.

LAND1301**Landscape Design 5: Design Resolution and Documentation**

Landscape Architecture Program

UOC9 HPW6

Prerequisite: LAND1202, LAND1272, BENV1242

This studio will focus on design resolution and documentation of one project. Students will develop skills in detailing, use of materials and CAD.

LAND1302**Landscape Design 6: Design with a Complex Program**

Landscape Architecture Program

UOC9 HPW6

Prerequisite: LAND1301

This studio will introduce students to projects with more complex programs and different approaches to dealing with them. It will focus on developing skills in the manipulation of architectonic space and form. A personal design portfolio forms part of this studio. A satisfactory portfolio is a requirement for completion of this studio.

LAND1321**Research Methods**

Landscape Architecture Program

UOC3 HPW2

Prerequisite: LAND1221, LAND1351

Investigation of various research methods with application to study in landscape architecture. Development of the critical logical and stylistic skills involved in researching, writing and presenting essays, theses, articles, papers and reports. Each student researches and prepares an approved thesis proposal including a bibliography, chapter outline and first draft chapter.

LAND1351**Landscape Management**

Landscape Architecture Program

UOC3 HPW2

Prerequisite: LAND1152

Planning and management of both natural and cultural landscapes. Historical review of landscape planning and management in Australia and overseas. Overview of environmental policy and legislative framework. Examination of a range of landscape management methodologies and processes.

LAND1371**Landscape Engineering**

Landscape Architecture Program

UOC3 HPW3

Prerequisite: LAND1272

Understanding structural design and construction techniques for a range of elements including: earthworks, drainage, retaining and freestanding walls, pavements and roads, masonry, steel and timber structures. Structural design and construction techniques applied to a range of difficult site problems.

LAND1381**Landscape Practice 1**

Landscape Architecture Program

UOC12

Students are required to obtain a minimum of 40 days of practical industry experience during enrolment in the program. This forms part of a total requirement of 90 days work experience.

LAND1401**Landscape Design 7: Urban Landscape Design**

Landscape Architecture Program

UOC12 HPW8

Corequisite: LAND1402; Prerequisite: LAND1302, LAND1382

An exploration of the relationships within the fabric of the urban environment including concepts of city functions and the analysis of disparate parts of the city with physical design being the primary focus. Context and place, history and theory are considered as well as analytical techniques. Design studios, lectures and seminars. This course generates the urban design context for the Graduating Project undertaken in LAND1402 Landscape Design 8.

LAND1402**Landscape Design 8: Graduating Studio**

Landscape Architecture Program

UOC12 HPW8

Co: LAND1401 Pre: LAND1302 & LAND 1382

Students are called upon to employ all the knowledge, skill and understanding they have gained in previous years and to explore issues and approaches in design which are of particular interest to them. The graduating design project follows from LAND1401 Landscape Design 7 and involves sketch design and detailed design development. Graduating project is related to the natural, urban or rural environment. The studio will critically assess aspects of theory through design speculation.

LAND1421**Landscape Thesis**

Landscape Architecture Program

UOC15 HPW0

Prerequisite: LAND1321

A specialised individual study, enabling each student to gain or extend knowledge and understanding in some aspect of landscape architecture. The proposed topic area and title must be approved by the Course Authority and the Program Head. The thesis is essentially evidence of this individual study, under staff supervision and culminating in a written document deposited in the Faculty library. The course requires each student to carry out the required research, organization of material and writing in order to submit a complete draft of a written thesis in week 7. Each student then refines the draft and undertakes the preparation of illustrative material and completion of all necessary references and bibliography, before the submission of the final unbound manuscript for assessment. The unbound manuscript is assessed by two readers and returned with corrections noted, so that a bound copy of the thesis can be lodged with the Faculty Student Centre. This one session course is graded in accordance with the normal University grading system.

LAND1431**Advanced Research Project in Landscape Architecture**

Landscape Architecture Program

UOC9 HPW2

Prerequisite: LAND1321

This course is an alternative to LAND1421 Landscape Thesis. Students in this course prepare a report following professional guidelines and gain further insight into the practice of landscape architecture. Students work closely with the instructor on the development of a set research topic and the preparation of a report. The course work refines skills in research, writing and report production. The course is structured as a combination of lectures and workshops, all of which support specific aspects of report preparation.

LAND1481**Landscape Practice 2**

Landscape Architecture Program

UOC12

Students are required to obtain a minimum of 40 days of design office experience during enrolment in the program. This forms part of a total requirement of 90 days work experience.

LAND1583**Professional Practice**

Landscape Architecture Program

UOC6

An introduction to the practice of landscape architecture, its scope and potential with a focus on current issues and practices. Topics include the framework of commercial and environmental law; project stages and procedures; contracts, consultancy and client relationships; legal and professional responsibilities with specific reference to ethics, negligence and risk; contract law and tender procedures. Assessment includes case studies, preparation of contract documents, preparation of a professional portfolio and a test.

LATN0102**Women, the Law and Society in Ancient Rome**

School of Modern Language Studies

UOC6 HPW3

Students will read in Latin portions of Cicero's speech Pro Caelio, and a selection of Catullus' love poetry and Juvenal's sixth satire. Through this reading students will gain a good understanding of aspects of Roman legal oratory (and practice) and poetry (both lyric and satire) as they focus on representations of the behaviour of some aristocratic Roman women. At the same time, these demanding texts will improve considerably students' ability to handle the Latin language. Students will be expected to read in the original, approximately 40 pages of prose and poetry.

Assumed Knowledge: HSC Latin.

LATN1000**Introductory Latin A**

School of Modern Language Studies

UOC6 HPW5

Excluded: GENT0432

Provides an introduction to the basic forms of the Latin language and essential grammatical constructions. It will be of particular interest to those who want to acquire a knowledge of Latin to support study in other fields, such as language learning, linguistics, ancient history, mediaeval studies or law, as well as those with a primary interest in Roman literature. The classes will be devoted to practice in translating from English into Latin and from Latin into English, and will also introduce students to some simple examples of Latin literature.

Note: Excluded HSC Latin or equivalent.

LATN1001

Introductory Latin B

School of Modern Language Studies

UOC6 HPW5

Prerequisite: LATN1000

Follows on from LATN1000, extending knowledge of Latin grammatical constructions and reading Latin texts of increasing difficulty. One class per week will be devoted to grammar, the others will be devoted to reading Latin texts. Language assignments will require translation from English into Latin as well as Latin into English.

Note: Excluded HSC Latin or equivalent.

LATN2001

Reinventing the Past: Roman Mythological Epic

School of Modern Language Studies

UOC6 HPW3

Prerequisite: HSC Latin or LATN1001

Students will read in Latin portions of Virgil's Aeneid 4 and Ovid's Metamorphoses 3. Through this reading students will gain a good understanding of how mythology and epic in Rome could be used to shape a vision of the past which problematized (Roman) imperial ideology. Students will also gain a good understanding of the Roman formulation of narrative epic. At the same time these texts will improve considerably students' ability to handle the Latin language. Students will be expected to read, in the original, approximately 1000 lines of poetry.

LATN2002

Mothers and Roman Sons: Suetonius and Tacitus on Families

School of Modern Language Studies

UOC6 HPW3

Prerequisite: HSC Latin or LATN1001

Students will read in Latin portions of Suetonius' life of Nero and Tacitus' Annals 14. Through this exemplary reading students will gain a good understanding of Roman social history and historiography. At the same time, these demanding texts will improve considerably students' ability to handle the Latin language. Students will be expected to read, in the original, approximately forty pages of prose.

LAWS1001

Criminal Law 1

Faculty of Law

UOC6 HPW4

Currently enrolled in a program in the Faculty of Law.

This course examines the principles of criminal law and liability. The aims of the course are: to promote and refine research and social policy analysis skills; develop a rigorous analytical and socially oriented approach to the study of criminalisation and criminal law; investigate the constitution of concepts like crime, criminal and criminal law; question traditional approaches which assume a unified set of principles; suggest an approach to criminal law as a number of diverse fields of regulation; acknowledge the importance of forms of regulation outside the criminal law; examine empirical material on the actual operation of the NSW criminal process such as court statistics and a court observation exercise; and examine the substantive rules developed in selected criminal offence areas. Topics include: the phenomenon of crime, the criminal process, components of criminal offences, drug offences, public order offences.

LAWS1002

Advanced Criminal Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Builds upon the introduction to criminal law and process in the compulsory core curriculum. Topics vary from year to year depending on current developments. The focus is on recent statute and case law, and

current research developments in criminalisation, law and order politics, criminal responsibility, defences, criminal process and sentencing.

LAWS1003

Crime and Society

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This subject seeks to provide students with a theoretical framework in which to understand crime as a particular social phenomenon: the criminalisation of particular social activities, who commits crime and whose social activities are more likely to be policed. Through an analysis of selected readings and case studies, we will look at the role of sex, race and class in explaining men's and male adolescents disproportionate participation in crime, men's and women's involvement as victims of specific types of crime and why, when women and female adolescents do commit crime, their criminality disrupts the construction of normative, 'law-abiding' femininity. The case studies we will examine this semester include:

(i) The Trouble with Men and Boys

(ii) The Colour of Crime: race and crime statistics

(iii) The Creation of Crime through Moral Panics: sex crimes and the criminal body.

LAWS1005

Penology

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

A critical interdisciplinary subject involving historical, sociological, political and legal materials. Topics include: prisoners and the prison movement; discipline and punishment; media issues; the legal regulation of the administration of punishment through imprisonment; privatisation of prisons; reform. The emphasis on different topics may vary from year to year according to contemporary developments.

LAWS1006

The Criminal Appeals Project

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides an opportunity for students to combine class work on appellate procedure, client-centred representation on appeal, issue spotting and persuasive writing, with work on an actual criminal trial transcript for the purpose of developing grounds of appeal and an appellate brief.

It is envisaged that there will be one, three hour class per week. The classes will be used to discuss appellate procedure, the ethics of appellate representation, issue spotting and the art of persuasive argument. Classes will also be set aside for discussion and analysis of a trial transcript. An excursion is envisaged to the Court of Criminal Appeal.

LAWS1011

Criminal Law 2

Faculty of Law

UOC6 HPW4

Prerequisite: LAWS1001

This course examines the principles of criminal law and liability. The aims of the course are the same as for Criminal Law 1. Topics include homicide, criminal defences, offences against the person, offences of dishonest acquisition, attempts, complicity, conspiracy, sentencing and penal practices.

LAWS1031

Information Technology Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This computer law course - known informally as Cyberspace Law - examines the law governing the Internet/cyberspace. Topics may include governance of cyberspace (the role of self-regulation, control of domain names etc), the special significance of encryption technologies;

digital signatures and electronic transactions; property in cyberspace (copyright in hypertexts, liability of ISPs etc), computer crime, privacy and surveillance, internet censorship, and tortious and other civil liability issues. E-commerce issues are discussed. No prior computing knowledge is required. Computing and data communications concepts are explained where necessary. This course may be taught via the Internet, or via a combination of Internet and face-to-face classes. Further details are on the subject web pages (<http://www2.austlii.edu.au/itlaw/>).

LAWS1033

Communications Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides an introduction to the two broad areas of law regulating the content and carriage of communications in Australia. These include laws relating to the planning and licensing of telecommunications and broadcasting services; rules about who can establish, own and control media and communications businesses; the regulation of media content - classification and censorship, free speech and defamation, laws affecting journalists, and local content; and consumer protection. It is a very topical course, with current issues including regulation of the internet, the introduction of digital broadcasting, and convergence. The course provides an excellent introduction to areas of media and communications law, which can be studied in more detail in the LLM program.

LAWS1052

Foundations of Law

Faculty of Law

UOC6 HPW5

Currently enrolled in a program in the Faculty of Law.

This course considers the legal significance of the arrival of the British in Australia to the original inhabitants and the settlers, the principal institutions of the legal system and their historical roles, interrelationships, and operation. The course considers the State legal institutions' development up to Federation, and the move to independence from British institutions. The course emphasises the doctrine of precedent and statutory interpretation in relation to these institutions. A number of torts are then studied, notably intentional torts and nuisance, as an example of the legal system in action.

This course also includes an integrated research component, which introduces students to the literature relevant to the law in Australia, differentiates primary and secondary materials, and familiarises students with both traditional and electronic research methods.

LAWS1061

Torts

Faculty of Law

UOC6 HPW4

Prerequisite: LAWS1051 or LAWS1052

The forms of argument used in tort law as exemplified in the law of negligence are examined. There is a detailed discussion of specific issues such as recovery for personal injury, for pure economic loss and the liability of statutory authorities and occupiers. Vicarious liability, defences and assessment of damages are covered as well as breach of statutory duty and some intentional torts. A second strand of the course introduces students to the wide-ranging debates about the appropriate role and function of tort law. This requires developing a working knowledge of feminist, economic and various other theories (eg corrective justice) of tort law. In developing this working knowledge students will be exposed to secondary materials which build upon and refer to the cases and statutes which are included in the course.

LAWS1071

Contracts 1

Faculty of Law

UOC3 HPW2

Currently enrolled in a program in the Faculty of Law.

LAWS1071 Contracts 1 is the first of two compulsory components of the undergraduate curriculum which together examine the law governing the formation and performance of contracts. This course initially examines the distinctive nature of contractual obligations and some contemporary social and economic influences upon it. The course then examines systematically the legal principles governing the formation of contracts. Finally, it gives special attention to the possibility of enforcement by third parties, and the manner in which the law of estoppel can result in enforcement of non-contractual promises

LAWS1072

Contracts 2

Faculty of Law

UOC6 HPW4

Prerequisite: LAWS1071

Contracts 2 is the second of the two compulsory contract law components of the undergraduate curriculum. The course presupposes that students have acquired knowledge of the content of LAWS1071 Contracts 1. Topics examined in LAWS1072 Contracts 2 include: the identification and interpretation of contractual terms; factors which may vitiate the formation of a contract, such as misrepresentation, mistake and common law and statutory unconscionability; the effect of exemption clauses; the nature of promissory obligations; breach of such obligations; circumstances in which contractual obligations are terminated; and remedies for contractual breach. Students are encouraged to examine the role of contract law from an historical and contemporary standpoint.

LAWS1081

Property, Equity and Trusts 1

Faculty of Law

UOC6 HPW4

Prerequisite: LAWS1071, LAWS1072; or LAWS1420

Property, Equity and Trusts 1 is one of the compulsory "core" courses of the law program. A central objective of the course is to ensure that students gain a sound understanding of basic principles of the law of property, as well as equity and trusts. Course coverage: the conceptual nature of proprietary interests; the nature of possession; remedies to protect possession of goods and possession of land; an introduction to native title; the doctrine of tenure; fragmentation of proprietary interests and the doctrine of estates; future interests; the history of equity and the nature of equitable interests in land; creation and assignment of proprietary interests in land at law and in equity; the express, implied and constructive trust; express trusts; powers and duties of trustees; estoppel; priority between competing legal and equitable interests in land.

LAWS1082

Property and Equity 2

Faculty of Law

UOC6 HPW4

Pre-requisite: LAWS1081

Property and Equity 2 is one of the compulsory "core" subjects of the law course. The course builds upon the foundation work covered in Property and Equity 1. Course coverage: the Torrens system of land title; creation of interests under the Torrens system and the resolution of priority conflicts; the caveat system and protection of unregistered interests; alienability of interests in land and the rule against perpetuities; the law of leases; the law of mortgages and securities; co-ownership and statutory trusts for partition and sale; planning the use of land; easements and covenants.

LAWS1091

Business Associations 1

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

An introduction to a number of important legal and theoretical aspects of the operation of business corporations. In addition, there is a brief overview of partnership law. The corporate law component of the course falls into two parts. The first deals with the process and incidents of incorporation, including the derivation of the modern corporation and an introduction to regulatory structures; an introduction to the corporate constitution, organs and capital; the separate personality of the corporation and its exceptions. The balance of the course is concerned with the structure and governance of the corporation. It examines the corporate organs (the board of directors and the general meeting) and the division of corporate powers between them; the duties and liabilities of directors and other officers; the remedies available to shareholders for the enforcement of directors' duties and protection against oppression or overreaching by controllers. While much of this legal doctrine is equally applicable to the large corporation as to the small enterprise, the course stresses the problems, processes and transactions typically encountered by small incorporated businesses.

Note: If taken as a compulsory course, it is LAWS4010 UOC6.

LAWS1092

Business Associations 2

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS4010 or LAWS1091

Areas of company law and securities regulation not covered in LAWS1091 Business Associations 1, and particularly those of relevance to larger companies. Students who wish to complete a comprehensive study of company law and securities regulation are advised to take this course in addition to LAWS4010 or LAWS1091. The areas of law covered in this course are: The role of the ASX and ASIC as bodies regulating companies and securities markets; The restrictions on the capital structure of the company, ie. the creation of classes of shares and the rights attaching to those shares, the issue of shares at a discount, and the reduction of capital; The restrictions arising out of the various forms of the capital maintenance doctrine, ie. the circumstances in which a company may buy back its own shares, the rules against the giving of financial assistance, and the restrictions on the payment of dividends; The terms and conditions upon which companies may raise funds from the public, ie. the issue and content of prospectuses; The structure and regulation of the market for corporate control (ie. takeovers). The course approaches these topics in two different ways. The first way of approaching each of the topics will be to focus specifically on the scheme of regulation established by that law. The second way of approaching each of the topics will be to establish some themes common to each of these areas of law. In particular, the course will focus on the approaches to regulation adopted in each of these areas.

LAWS1812

Sport and the Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Sport is a central part of modern Australian society and culture. Not surprisingly, as professionalism has become the norm, those involved with sport, be they players, managers, administrators and supporters, are increasingly looking to the law to protect their rights and/or resolve their problems. How and why has this happened? The course touches on a number of different areas of law such as torts, contracts, criminal law, administrative law, and business associations. The aim is to draw upon specific issues from these various branches of the law and to place them in an historical and modern day context so as to give participants an understanding of the developing role the law is making in the world of sport as well as the policy and ethical issues facing those involved.

LAWS2019

Financial Economics and Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course aims to educate students in topics in the theory and applications of Financial Economics relevant to Law. Legal applications include prejudgment interest; analysis of securities fraud (including damages); taxation of new financial products; analysis of liability for negligent investment advice; market efficiency and insider trading; aspects of the business judgment rule.

LAWS2021

Industrial and Intellectual Property

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1081, LAWS1082; or LAWS3010

Areas of the law relating to concepts of intangible property including the law of patents, trademarks, trade designs, copyright, confidentiality, passing off and the protection of business reputation. This course is a survey of the areas of law relating to the protection of ideas and new technology and is an excellent introduction to further study in communications, information technology and internet law.

LAWS2022

Trade Practices

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Analyses the operation of competition law in Australia and the types of conduct and practices that are anti-competitive. The focus is on the restrictive trade practices provisions of the Trade Practices Act 1974, the decisions of the Federal Court and the determinations of the Trade Practices

Commission and the Trade Practices Tribunal. Where relevant, US, UK and European decisions are considered.

LAWS2023

Trusts

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The nature, history and classification of trusts; the use of trusts in modern law; interaction of the trust and contract; express private trusts; purpose trusts; discretionary and protective trusts; the creation and variation of private trusts; trusts in commerce; resulting and constructive trusts; charitable and public trusts; powers and duties of trustees.

LAWS2024

Commercial Finance

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Commercial Finance aims to provide an introduction to some principal areas of commercial law of general relevance to legal practice and of particular relevance to those interested in banking. Topics: 1. Negotiable instruments, including a study of commercial bills against the background of a description of the operation of the commercial bills and money markets. 2. Secured transactions: students are introduced to the law on securities over personal property including priorities; reference is made to credit arrangements in use in the distribution and sale of goods and services. 3. Introduction to law of bankruptcy.

Note/s: This course may be studied on its own but students wishing to complete an introductory study of banking law should take LAWS2033 The Law of Banking as well. Students wishing to complete an introductory study of commercial law are advised to take LAWS2026 Commercial and Consumer Sales. Other areas of commercial law are dealt with in LAWS2037 Consumer Protection Law.

LAWS2025

Advanced Contract Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1071, LAWS1072; or LAWS1420

This course normally covers some significant topics of the law of contract which are usually omitted from the compulsory contract law courses, LAWS1071 Contracts 1 and LAWS1072 Contracts 2 (eg illegality; agency). It then deals in depth with a selection from the following list of topics which are very important in commercial practice, but are dealt with somewhat briefly in the initial courses: uncertainty and incompleteness in contract formation; economic duress; termination for breach and frustration; privity and third party rights; interpretation). The course constantly considers the increasing impact of equitable principles, and of the law of restitution, on the common law of contract. There is likely also to be an examination of some leading theories on the nature and likely development of contract law.

LAWS2026

Commercial and Consumer Sales

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This is an introduction to principal areas of commercial law of relevance to legal practice. This course deals primarily with the intersection of property and contract law in the sale of goods, a species of personal property. It includes a study of product liability, including the liability of the sellers, manufacturers and credit providers. It provides a foundation for the study of risk in the rules for the transfer of property in goods. A major component of the course is the study of Trade Practices law particularly the prohibition against misleading and deceptive conduct. The course examines available statutory remedies.

LAWS2027

Industrial Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Commonwealth and New South Wales systems of regulation of industrial disputes. The Commonwealth and New South Wales systems of workplace bargaining. The Commonwealth and New South Wales legislation regulating the activities of trade and industrial unions, including their internal administration. The Commonwealth and New South Wales systems for arbitration of unfair dismissals.

LAWS2028

The Law of Employment

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The employer-employee relationship with particular attention to the individual contract of employment on which that relationship rests, the legal concept of an employee, incidents of the employment relationship, the mutual rights and duties of the employer and the employee; the termination of the relationship with particular reference to the discharge of the contract of employment by performance, by notice and for cause and the remedies for wrongful termination; individual contracts and workplace agreements; the legislation which is designed to protect wages, hours and various leave entitlements; legislation with respect to unfair dismissal; AntiDiscrimination; programs for Equal Employment Opportunity and Affirmative Action.

LAWS2031

Occupational Health and Safety Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law relating to compensation for work-related injuries and disabilities and to the regulation of safety standards in workplaces. Topics include: the employer's common law duty of care; the common law duty of care of manufacturers of products for use at work; the development and application of workers' compensation schemes; existing protective legislation in Australia; individual rights under protective legislation.

LAWS2032

Employment Protection Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law relating to protection against dismissal from employment. Topics include: basic concepts of substantive and procedural fairness; statutory protection against unfair dismissal under Commonwealth and State legislation; the British system; international conventions; directives of European Parliament; regulation of redundancies; employment protection provisions in industrial awards; employment protection through regulation of unfair contracts; employment protection through equitable remedies; the labour market implications of employment protection.

LAWS2033

Law of Banking

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Law of Banking provides an introduction to aspects of the practice of banking and to relevant legal principle. Both traditional views and contemporary developments are adverted to. While the central focus is on the relation of banker (in legislation now authorised deposit-taking institution) and customer, not only the cheque but also a range of recently developed and developing banking instruments and processes are considered. Regulation and deregulation are discussed and in that context functionally related activities are traversed.

Note: This course may be studied on its own but students interested in a wider view of banking law should also enrol in LAWS2024 Commercial Finance.

LAWS2035

Land Dealings: Residential and Commercial Contracts

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law of vendor and purchaser with special emphasis on the standard form contract for sale of land in use in New South Wales. Aims to benefit those intending to practise in any field of land law and property law, whether in large, medium or small legal firms, city, suburban or country. The course focuses upon both commercial and residential contracts. The course will also benefit those at the bar practising in the property and equity area. Topics: whether a binding contract of sale exists, auction contracts; vendor disclosure and anti-gazumping legislation, the requirements of the Statute of Frauds, exchange of contracts, proper preparation of the contract of sale, detailed examination of the standard Law Society approved contract of sale, the law concerning notices to complete and other remedies available to vendor and purchaser, remedies for breach of contract, damages, liquidated and unliquidated, termination, specific performance; the law of deposits.

LAWS2037

Consumer Protection Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legislative strategies for the protection of consumers and the effect of this legislation upon markets. The following protective strategies are considered: advertising self regulation; statutory regulation of advertising; the regulation of packaging and labelling; protection against sales promotion techniques; franchising; the licensing of persons dealing with consumers; product liability; statutory regulation of unconscionable conduct; and special procedures for consumer claims.

LAWS2040

Interests in Securities

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course focuses primarily on the principles under various strands of law that underlie dealings in securities and in interests in securities. It is a mix of the laws of property (and, in particular, relating to intangibles and secured transactions), contract and corporate insolvency as well as thorny questions of the conflict of laws. We look at these not only from an Anglo-Australian perspective but on a comparative basis examining the analysis in other countries including the United States, Japan and Germany. We also consider international initiatives underway to harmonise law in this area. The course necessarily provides background on the modern clearance and settlement structures used in Australia and around and the variety of holding patterns that are now common place.

LAWS2041

Financial Services Regulation

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course provides an analysis of the Financial Services Reform Act 2001 (now in the Corporations Act), Australia's most thorough reform of financial regulation. It studies the main techniques of financial regulation: disclosure, licensing, prohibitions of market misconduct, self regulation and powers of investigation and enforcement. It does this through considering the rules and practices constituting financial regulation, the market institutions and regulatory context in which it operates and the additional insights we gain from contemporary regulatory studies. The course tackles current issues in financial regulation such as the impact on law of product and market convergence, intermediary conglomeration, globalization, use of computer and telecommunications and responses to recent ethical failures in financial services.

LAWS2051

Elements of Income Tax Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

1. Introduction: the policies served by taxation with particular reference to distributional and economic objectives; the uniform tax system: the structure of the current Income Tax Assessment Act and its administration.
2. A critical analysis of the principal concepts of the law of income taxation and the taxation of capital gains and fringe benefits; the law on income

and deductions as applicable to individuals; the trading stock provisions and tax accounting; concepts of residence and source. 3. The judicial interpretation of taxing statutes; ethical and policy questions concerning tax avoidance.

LAWS2052

Advanced Revenue Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS2051

Areas of income tax introduced in LAWS2051 Elements of Income Tax Law in greater depth. Several areas of income tax law and other revenue law not touched on in the earlier course. Topics: 1. taxation of partnerships, trusts and companies, including capital gains tax; 2. assignment of income; 3. tax avoidance and evasion - analysis of general, and specific, antiavoidance legislation and penalties legislation; 4. an introduction to aspects of international tax including some international tax agreements; 5. tax decisionmaking and review in the context of a mass decision making process; 6. an introduction to goods and services tax.

Note: Students should have completed LAWS4010 Business Associations 1 6UOC or LAWS1091 Business Associations 1 6UOC or be taking that course concurrently with LAWS2052.

LAWS2065

Comparative Law

Faculty of Law
UOC6 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Some of the principal legal systems of the world, and the advantages in looking at legal problems from a perspective broader than that of one's own legal system. Three parts: 1. An introduction to the Modern Civil Law, Roman, Hindu and Islamic legal systems, wherever possible comparing them with the Common Law system, and with each other. The history and uses of Comparative Law, and a discussion of the manner in which the Civil Law and Common Law systems have interacted with the others, and with each other; 2. a more detailed study of the Civil Law system, through the medium of criminal procedure and administrative law in Europe, especially France, against the background of the common law; 3. student-led seminars examining, comparatively, topics of world-wide concern, eg. consumer protection, the role of the corporation in modern society, protection of civil liberties, judicial review of administration action, and environmental protection.

LAWS2079

Restitution

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Unjust enrichment, along with such subjects as contract and tort, is one of the law's primary sources of rights and obligations. This course examines unjust enrichment, and the law's response to unjust enrichment, called restitution. Liability in unjust enrichment is encapsulated in the phrase "unjust enrichment at the expense of the plaintiff". We commence with enrichment. Not all benefits received by the defendant are enriching and the courts have developed tests to determine whether the defendant is enriched and whether this enrichment is at the plaintiff's expense. The next question is injustice, this question being answered by the unjust factors. We will cover various unjust factors, including mistake, failure of basis, pressure and policy motivated unjust factors. Finally, we will look at two defences: change of position and estoppel.

LAWS2081

Public International Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

International law seeks to order human affairs at the international level. It accordingly covers a vast field, extending to issues such as autonomy or otherwise of peoples and territories, the allocation of resources (land, maritime and air), the preservation of the environment, the regulating of interstate transactions, the resolution of disputes and the maintenance of international peace and security. This course aims to provide a solid introduction to certain central topics within the overall field of international law. Topics covered include: the nature and sources of

international law, the relationship between international law and domestic law, international agreements, statehood and title to territory, territorial and maritime jurisdiction, recognition of states and governments, immunities, state responsibility, the use of force, and peaceful settlement of international disputes.

LAWS2082

Conflict of Laws

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Conflict of Laws or Private International Law is a species of private law which deals with problems involving a foreign or an interstate element. The introduction of that foreign or interstate element necessitates an examination by a New South Wales court of three main issues: 1. Whether or not the court has jurisdiction to deal with the problem, and even if it does, whether or not it will assume jurisdiction. 2. If it has assumed jurisdiction the court must then ask itself what is the most appropriate law to apply to the problem before it. 3. Or, the court may have to decide whether or not to recognize and enforce a judgment of a foreign court or the court of another state. Those problems which involve interstate elements may be affected by provisions of the Commonwealth Constitution or by some federal legislation. Failing that, the solution to these interstate problems may call for an approach that is different to the solution of international problems simply on the basis that we are dealing with States of the same Commonwealth. For the purposes of this course the solutions that courts and legislatures have offered to such problems are examined in a few selected areas such as family law, contracts, torts and property. Wherever possible, emphasis is placed on the development of more appropriate solutions to these problems.

LAWS2084

International Trade Law: The Law and Policy of the WTO

Faculty of Law
UOC8 HPW4

Prerequisite LAWS1001, LAWS1011; or LAWS1610. Corequisite LAWS2311 or LAWS1010 AND Excluded LAWS9972

This course introduces students to the legal, business and policy aspects of international trade, focusing on the legal framework of the various WTO Agreements. This course analyses the regulatory legal principles of the WTO and how they operate at both the national and international level. More specifically, the course covers issues such as tariffs and tariff negotiations, quotas, most favoured nation, regional trade agreements, national treatment, intellectual property, anti-dumping, export subsidies, countervailing duties, exceptions for environmental, health and safety and other issues of contemporary importance. The course gives participants a sound understanding of key legal issues and principles relating to international trade and a thorough knowledge and understanding of the importance of domestic and international policy issues to the world trading system. There are no prerequisites for this course and no background in economics, international relations or international law is assumed.

LAWS2085

Comparative Law

Faculty of Law
UOC8 HPW0

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course will introduce students to some of the major legal systems of the world. Comparative law has an important function in enhancing an understanding of our own system and in raising awareness of alternative solutions to legal issues. Increasingly, comparative law is used for law reform purposes and by judges in their decision-making process. By the end of this course students should be able to apply comparative methodology for law reform purposes, compare legal institutions and substantive laws of foreign legal systems in a meaningful way with similar institutions and laws in the Australian legal system, critically assess the possibilities and limitations in transplanting law from one country to another, and explain and discuss the impact of cultural, political and economic factors on law. Topics include functions and aims of comparative law, comparative methodology, the theory of 'legal families', the 'civil law' - 'common law' dichotomy, introduction to the German legal system, comparative approaches to tort law, reception of foreign laws, comparative human rights jurisprudence, the role of the European Court of justice, harmonisation and unification of laws, and globalisation.

LAWS2086**International Law Competitive Moot**

Faculty of Law

UOC8 HPW0

Prerequisite: LAWS2088

The International Moot Program is open to students who have been selected to represent UNSW in one of the following competitions: Jessup International Law Court Competition; Jean Pictet International Humanitarian Law Competition; Manfred Lachs Space Law Moot Competition; and Vis International Commercial Arbitration Moot Competition. Each of these competitions is a prestigious international competition which involves extensive research and writing of case memorials followed by participation in oral mooting rounds and the possibility of representing Australia in final competition rounds overseas. Students will be selected for teams early in Session 2 on the basis of academic merit, research, and/or mooting skills and experience. The majority of the work for each competition will be conducted over the summer months. Application is open to all students who have completed International Advocacy, Public International Law or International Humanitarian Law.

LAWS2088**International Advocacy**

Faculty of Law

UOC8 HPW4

Prerequisites: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010; Excluded: LAWS4082

This course has a dual aim: to train students in advocacy before courts and tribunals, and to develop and enhance students' understanding of litigation in international fora. Students will be provided with an excellent grounding in issues arising in litigation on the international stage, including jurisdiction, admissibility, interim measures, principles of state responsibility and remedies. The course will focus on a variety of international courts and tribunals, including the International Court of Justice, the International Criminal Court, international commercial arbitration, the WTO Dispute Panel, the UN Human Rights Committee, and others. The course will also have a practical component aimed at enhancing the advocacy skills of participants and applying the theory to the practical aspects of the conduct of international advocacy. Students will be involved in the preparation and presentation of a hypothetical case before an international tribunal of their choice and will be given the opportunity to develop their advocacy skills, including the preparation of written submissions and delivery of oral submissions, in a non-competitive context. Those students not interested in the advocacy dimension of the course have the option of completing an essay focussing on international courts and tribunals. This course is the preferred prerequisite for the International Moot program.

LAWS2091**Introduction to Space Law**

Faculty of Law

UOC4 HPW0

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides a basic understanding of the legal regime regulating the use of space, which is necessary in order to apply the law to the many space activities currently (and in the future) being undertaken. This course examines the underlying legal principles that specifically regulate the use, exploration and exploitation of space. It examines the evolution, legal framework and organisational structures of this area of law, and concentrates on the 5 specific international space law treaties as well as the various United Nations Principles. The domestic regulatory systems of a number of countries, including the recently implemented Australian legal regime, are also discussed.

LAWS2123**Chinese Legal System**

Faculty of Law

UOC8 HPW0

Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This is a two-week intensive course held in Beijing each January. It provides an introduction into the legal system of the People's Republic of China with particular reference to modern developments in contract and commercial law. China opened up its economy to market forces only in the late 1970s. When it did so, law and the legal system lost the pariah status to which they had been assigned during the Proletarian Cultural Revolution. The course examines the role law is playing in modern China

by reference to its historical antecedents. The course examines particular areas of development not only for their own sake but also as indicators of the changing role of law in Chinese society. Areas which are the subject of particular attention include: the elements and institutions of Chinese legal system; the role of law in Chinese society from the perspectives of legal history and philosophy; contract law; intellectual property law; foreign investment law; corporate and securities law; foreign trade law and mediation, arbitration and civil enforcement procedures.

LAWS2140**Public Law**

Faculty of Law

UOC3 HPW2

Currently enrolled in a program in the Faculty of Law.

This course introduces the students to the study of public law, including its methods of reasoning, history and fundamental principles. It deals with introductory principles and theories of constitutional and administrative law and the essential features of our system of government. Topics include the Westminster System, Federation, Indigenous Peoples and the Question of Sovereignty, the Federal Parliament, the Separation of powers, Human Rights and Bills of Rights and Constitutional Change.

Note/s: Taken concurrently with LAWS1071 Contracts 1 as a composite course.

LAWS2148**Sir Harry Gibbs National Moot Competition**

Faculty of Law

UOC8 HPW0

The Sir Harry Gibbs National Moot Competition is the only national mooting competition in Federal Constitutional Law. It is organised by the T.C. Beirne School of Law at the University of Queensland and supported by the Australian Association of Constitutional Law. The competition began in 2002 with UNSW as a participant. The competition is held in Brisbane each year in early October. The four team members will receive course credit for their participation.

LAWS2150**Federal Constitutional Law**

Faculty of Law

UOC6 HPW4

Pre-requisite: LAWS2160

Federal Constitutional Law deals basically with a number of the Commonwealth's legislative powers and their limitations, as discussed in the case law. In particular, the following powers and limitations: trade and commerce, external affairs, corporations, race, aliens, appropriation, grants and taxation, inconsistency of Commonwealth and State laws, freedom of interstate trade and commerce, excise and implied limitations on Commonwealth and State powers, including implied rights. Larger ideas concerning the nature of constitutional interpretation and the basic values of public law are also discussed. Further study of constitutional law may be undertaken in LAWS2292 The High Court of Australia and LAWS 429 Comparative Constitutional Law.

LAWS2156**Issues in Australian Constitutional Law**

Faculty of Law

UOC4 HPW4

Prerequisite: LAWS2150

A seven week, 4UOC course on selected topics in Australian constitutional law and conducted in seminar style. The first three weeks of the course centre on discussion and analysis of prepared materials. The remaining four weeks are allocated to student led seminars on topics selected for research essays. Emphasis is on recent constitutional litigation and material not developed in detail in compulsory courses. Issues for inclusion in the prepared materials and/or on the list of suggested research essay topics may include: status of Territories, contemporary problems about State Constitutions, just terms for acquisition of property, re-thinking the conciliation and arbitration power, technology and the Constitution, application of High Court decisions in lower courts, style and method in constitutional argument, developments on Chapter III, viability of proposals for amendment, standing in constitutional cases, amicus curiae, role of special leave in constitutional appeals.

LAWS2158**Principles of Colonial Constitutional Law**

Faculty of Law

UOC4 HPW4

Currently enrolled in a program in the Faculty of Law.

This course focuses on the constitutional law principles which have influenced and continue to influence aspects of contemporary Australian constitutional law and structure. The object of the course is to demonstrate that the substance of many current principles may be traced to developments in the colonial era. The first three weeks of the course centre on discussion and analysis of prepared materials. The remaining four weeks are allocated to student led seminars on topics selected for research essays. Topics in the prepared materials and/or on the list of suggested research projects may include: Commonwealth Constitution as an instrument of colonial self-government, judicial review in the colonial period, repugnancy doctrine, significance of the Colonial Laws Validity Act, the legacy of manner and form, origin of the “peace, order and good government” formula, extra-territoriality, colonies and treaties, colonial Governors and military powers, the Viceroy debate, concept of plenary power, structure of colonial constitutions and charters, influence of the British North America Act, the Federal Council of Australasia experiment, role of the Privy Council, long shadow of English constitutional revolutions, non-citizens and prerogative powers, the British connection and colonial constitutional legacies in the twentieth century, colonial models of responsible government.

LAWS2160

Administrative Law

Faculty of Law
UOC6 HPW4

Currently enrolled in a program in the Faculty of Law.

This course considers the law concerning the accountability and control of government officials. Topics covered include: delegated legislation; the duty to give reasons for administrative decisions; freedom of information, the Ombudsman, Administrative Appeals Tribunals; and judicial review of administrative action (the principles of legality and procedural fairness).

LAWS2181

International Humanitarian Law

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

International humanitarian law (also known as the law of war, or the law of armed conflict) consists of the international rules governing the conduct of hostilities, the methods and means of warfare, and international rules designed to protect the victims of armed conflict. It can also be said to cover international rules relating to treatment of displaced persons and refugees where these persons are fleeing from armed conflict. This course will examine the laws relating to the conduct of armed conflicts, including the four 1949 Geneva Conventions and their historical antecedents; the 1977 Protocols; the laws of the Hague; problems of enforcement of humanitarian law; war crimes; humanitarian intervention; protection of refugees; and the role of NGOs, the Red Cross, and the UN. The proliferation of internal conflicts during the last few decades and the increasing threat of international terrorism is forcing us to reexamine many of the traditional axioms of international human rights and humanitarian law. The course will examine the contemporary relevance of international humanitarian law in light of these challenges.

LAWS2182

International Human Rights Law and Advocacy

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course introduces students to the fundamental legal principles and institutions of international human rights. It focuses particularly on the application of human rights principles to current issues, including the role of human rights in a rapidly globalising world. Special attention is given to economic, social and cultural rights, human rights and developing countries, the expansion of multinational corporations, trade and investment liberalisation, the rise of terrorism, the rights of women, the “cultural relativism” debate and the rights of Indigenous peoples.

LAWS2183

Australian Journal of Human Rights

Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisers to the Australian Journal of Human Rights, to

have satisfactorily completed this course on the basis of work done as Student Editor for a specified number of issues of the Australian Journal of Human Rights.

LAWS2184

Human Rights in the Global Economy

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course introduces students to the policies and legal principles operating in the global economy and their relationship with human rights law, with particular emphasis on economic and social rights, and analyses the impact on those rights of the global economic institutions and multinational corporations. Controversial issues will be explored, including the lending policies of the Bretton Woods Institutions (the World Bank and the IMF), the human rights impacts of the law of the World Trade Organisation and liberalisation of foreign investment in the Global South. The course studies and evaluates current initiatives for the regulation (and self-regulation) of transnational corporations in relation to human rights. Cases raising relevant human rights issues before the WTO's Appellate Body and before selected national and international courts and tribunals are studied in detail.

LAWS2185

Public Interest Litigation: Origins and Strategies

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Public Interest Litigation: Origins and Strategies will examine how to realise human rights and advance social justice through the practice of law. The course will trace the emergence of the public interest litigation (PIL) movement by reference to the use of law in shaping social policy in America, India and South Africa. Students will evaluate various litigation strategies adopted to advance a public interest in the Australian context. Topics covered will include: test case litigation, amicus curiae interventions, class actions or representative proceedings, and litigating Bills of Rights; barriers to conducting PIL, including standing, resource constraints and the risk of adverse costs orders. A critical aim of the course is to encourage students to recognise both the value and limitations of public interest litigation and to demonstrate a capacity to devise legal strategies, with reference to case and statute law, to promote issues of social importance.

LAWS2186

Human Rights Defender

Faculty of Law
UOC8 HPW0

Currently enrolled in a program in the Faculty of Law.

The Human Rights Defender is a semester-long internship with the journal and the Australian Human Rights Centre (AHRC). The Defender is a tri-annual publication which has a long history with the AHRC and is known for providing high-quality, engaging content on human rights issues, both nationally and globally, in an accessible format. Students will be responsible for overseeing the production of at least one edition of the journal. The Editorship will provide students with an understanding of current human rights issues as well as organisations and individuals operating domestically and internationally that advocate and campaign on these issues. Students will be responsible for liaising with these organisations to commission articles for the Defender. In addition, students will liaise with, and coordinate, volunteer student editors and assign tasks accordingly. The Student Editor will be working as part of a team within the Defender and also within the AHRC. They will gain skills in editing and proofing, writing, working with and coordinating volunteers, and commissioning and forming relationships with other human rights organisations, academics and members of the legal profession.

LAWS2212

Australian Indigenous Law Reporter

Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisers to the AIRL, to have satisfactorily completed this course on the basis of work done as Student Editor for two issues of the Australian Indigenous Law Reporter.

LAWS2213**Foundations Enrichment 1**

Faculty of Law
UOC2 HPW2

This course will provide students with extra support, and assistance to enhance the successful complete of first year in minimum time. The course provides intensive small group tutoring for Indigenous students, focussing on developing skills in legal writing, reading and comprehension, problem-solving, and critical and analytical skill development.

LAWS2214**Foundations Enrichment 2**

Faculty of Law
UOC2 HPW2

This course is an extension of Foundations Enrichment 1 in its focus on providing support and sufficient resources to Indigenous LLB students. The course requires students to attend the Kingsford Legal Centre as a group to gain first hand experience of practical legal problem-solving, community legal practice and client interaction. Communication skills, in particular interviewing skills, will be a major focus of this course, along with increasing student's self-confidence. Students will gain the opportunity to experience law in a practical sense and thus gain an enhanced understanding of the general legal system, the legal aid system and the relevance of legal practice to a community.

Pre-requisite: LAWS2213 Foundations Enrichment 1

LAWS2222**Communications Law: Broadcasting and Telecommunications**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course addresses the law regulating the structure of communications in Australia. This is a very topical course with current issues including digital broadcasting, convergence, and the implications for traditional regulation of broadcasting and telecommunications. Topics include: planning and licensing of telecommunications and broadcasting services; rules about who can establish, own and control media and communications businesses; the introduction of competition into telecommunications in Australia in the 1990s; consumer protection issues in relation to communications; and, rules affecting electronic communications content such as the Australian Content Standard, the Anti-Siphoning rules governing premium sports on free-to-air and pay television; and classification schemes including film censorship guidelines and online content regulation.

LAWS2232**Law After Communism**

Faculty of Law
UOC8 HPW4

Prerequisite LAWS1011, LAWS1011, Corequisite LAWS2311. Excluded EURO2700

This course will seek to introduce students to some of the characteristic features of the post-communist world, to some of its difficulties, problems, challenges and triumphs; and to similarities and differences among the developments in post-communist societies. In particular law students will focus on the attempts to build and rebuild legal institutions to replace or transform those which were inherited from communism, and of the problems and prospects facing such attempts. Among the particular issues discussed are the prerequisites for establishing the rule of law after its prolonged absence, the role of constitutions and constitutional courts, the legal requirements for, and problems associated with, privatizing an economy which long had no private property, the legal impact of the legal standards of the European Union on any countries that want to join it and must satisfy those standards, the moral and legal problems associated with attempts to deal with the legacies of an unsavoury past. These latter problems include questions about the present role of former communists and informers of communist secret services. They also include questions of criminal justice in relation to war crimes and crimes against humanity in the former Yugoslavia.

LAWS2241**Jewish Law**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course provides a comprehensive introduction, taught in three sections, to the history, philosophy and principles of Jewish Law. The first section addresses some of the fundamental principles of Talmudic Law, including its role as a legal system, its seat of authority, its flexibility, the place of equity and custom, the relationship between halachah (Talmudic Law) and the State of Israel, and its influence on other legal systems. The second section deals with the main headings of the Talmudic legal system - property, torts, contracts, partnership, agency, trusts, employer and employee, criminal law, privacy, marriage and divorce, inheritance, conflicts and choice of law, international law and legal procedure. The third section introduces text material (in English translation) on Talmudic civil and criminal law.

LAWS2242**Law and Religion. Christianity and the Western Legal Tradition**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course will explore the complicated and fascinating relationship between Christian theology and law. The religious dimension of western law for a long time was forgotten or overlooked. The change started with publication of Harold Berman's "Law and Revolution. The Formation of the Western Legal Tradition". The issue of law and religion has long been pushed to the margins of the main trends of jurisprudence, but in the past few years there is a growing number of publications on 'law and religion'. The aim of the course is to explore that stream of thinking about law and its connection with theology and show the religious sources of many Western legal concepts.

The course will focus on historical and contemporary issues, among them the impact of Christianity and its theology on the western legal tradition from Paul, Augustine of Hippo through to Thomas Aquinas and Luther, Calvin and others. Their impact on changes in the western concept of law will be explored. The reciprocal impact of law on Christianity and its theology will also be investigated. Contemporary scholarship on, and crossing, the borders between Christian theology and law will also be discussed.

LAWS2251**Legal History**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

One of the themes of this course is the nature of legal historiography. The course also examines the emergence of the rule of law. It charts the role played by law and legal institutions in the division of political power, and falls into three parts: 1. the struggles between the courts, the parliament and the monarchy in seventeenth century England, with special attention to the conflict between Sir Edward Coke and James I, the English Civil War and the Glorious Revolution; 2. the political consolidations of eighteenth century England with special attention to Blackstone, as well as to the assessments of modern historians like E.P. Thompson and Douglas Hay; 3. the reception of legal ideas into the penal colony of New South Wales, and the role played by rule of law in the political formation of a new society.

LAWS2272**Australian Immigration Law and Practice**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Examines Australian immigration law and practice. Focus is on the role of law in immigration selection and control, and the notions of citizen and alien. The course considers different models of selection and control. It examines in detail the present law in relation to the main visa classes granting permanent and temporary residence. Topics include: freedom of movement, residence and citizenship, entry for migrants, and temporary residents, admission and stay under international obligations, illegal entry, the function of compliance, the detention and removal of illegal immigrants and the immigration appeal system.

LAWS2275**Regulation of Economic Activity**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Theories, economics and politics of regulation. The role of competition policy; the case for exemption. Regulation v self-regulation. Regulatory reform. Selected case studies in economic regulation.

LAWS2282

Advanced Administrative Law: Adapting to Regulatory Change

Faculty of Law
UOC8 HPW4

Pre-requisite: LAWS2160 Administrative Law; Co-requisite: LAWS2311 Litigation 1

Distinctions between public and private have long troubled administrative lawyers interested in issues of judicial and merits review, regulatory design, and governmental liability in tort and contract. Corporatisation, privatisation, intensified outsourcing, tort law reform, and statutory and Executive compensation schemes in substitution for tort law, have all increased the need to study these issues in depth. Professors Mark Aronson (UNSW) and Carol Harlow (London School of Economics) will conduct the bulk of the course, with additional guest classes by Professors Dennis Pearce and John McMillan (former and current Commonwealth Ombudsmen) and Professor Mike Taggart (Auckland).

LAWS2292

The High Court of Australia

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The role of the High Court of Australia as a legal, political and social institution in the framework of Australian government. Topics include: the relationship of the High Court to the other institutions of government; the relationship of the Court to other courts within the judicial system; the historical development of the Court and its distinctive features through different periods of that development; the Court's composition and internal working, its style of legal reasoning, its contribution to the development of distinctively Australian law in selected areas and the place of its individual members in the Australian judicial tradition. The course is divided broadly into five parts: the history of the Court and its justices; appointment and removal of justices; the jurisdiction and operation of the Court; the Court's role and record in public and private law; and the Court's relations with the political branches of government, including its public accountability. About half of the course is based on discussion of prepared materials, and the other half on research essays by each student presented to the class in the style of a seminar. One or more High Court justices may be invited to address the class. In 2001 former Chief Justices Sir Gerard Brennan and Sir Harry Gibbs addressed the class.

LAWS2293

Constitutionalism

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course will introduce students to discussion and criticism of the institutional and theoretical underpinnings of a liberal-democratic constitutional order. It will do this by way both of examination of some of the key moments in constitutional development and design, and of discussion of some of the central issues of political and legal theory which constitutionalism raises. Among the topics considered are: 1. Philosophical history of the notion of constitutionalism and of such related ideas as: sovereignty, rights, the rule of law, separation of powers, republicanism, and federalism; 2. Issues in the design of constitutional order: the American Founding Fathers, the nineteenth century idea of the Rechtsstaat (law-governed state), and contemporary constitutional experiments in post-communist Europe; 3. Constitutional interpretation via judicial review, particularly the problem of applying constitutional texts in changing circumstances; 4. The sources of constitutional legitimacy.

LAWS2301

Remedies

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

A study of the principal private law remedies at common law and in equity. The course analyses the nominate remedies of Australian law by reference to the remedial goals of the legal system, namely compensation, restitution, punishment and coercion. The relationship between the

various remedies is also explored, as are the ways in which remedies are enforced in practice. The course aims to synthesise the law studied in courses, such as Torts, Contracts and Property and Equity from a remedial perspective.

LAWS2303

Clinical Legal Experience (Intensive)

Faculty of Law
UOC16 HPW16

Prerequisites: LAWS6210; LAWS2311

Clinical legal education takes students out of the classroom and places them in a legal practice. This enables students to analyse the effect of law in practice and engenders in students an appreciation of the ethical, social and practical complexity of the legal system. Students are required to attend the Faculty's clinic, Kingsford Legal Centre, two full days a week. The clinic is a community legal centre which provides a free legal service to the local community. Students manage clients' files under the supervision of experienced clinical supervisors who are practising solicitors. Students take responsibility for the interviewing of clients and the research, drafting and preparation necessary to resolve legal difficulties by litigation or other means. In addition to two days attendance, students are asked to attend evening advice sessions during which they interview people attending for legal advice with volunteer lawyers. A daily tutorial and a weekly class provide an opportunity for discussion and analysis of students' experiences, and for instruction in legal procedure and skills. There are regular opportunities to attend Court and Tribunals. Major areas of work in which students will be involved include domestic violence, discrimination, consumer credit, victims compensation, family law, employment law, wills, legal aid and criminal justice issues. As well as clients files, students take part in community education, and in policy and reform work. The course is offered in both teaching sessions and over summer. A student who has enrolled in and who has passed or failed LAWS2304 Clinical Legal Experience may not enrol in this course without the approval of the Associate Dean. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2304

Clinical Legal Experience

Faculty of Law
UOC8 HPW8

Prerequisites: LAWS6210; LAWS2311

Clinical legal education takes students out of the classroom and places them in a law practice. This is both to enable students to analyse the effect of law in practice, and to engender in students an appreciation of the ethical, social and practical complexity of the legal system. Students are required to attend the Faculty's clinic, the Kingsford Legal Centre, one full day a week. The clinic is a community legal centre which provides a free legal service to the local community. Students work on clients files under the supervision of experienced clinical supervisors who are practising solicitors. This involves interviewing clients, and the research, drafting and preparation necessary to resolve legal difficulties by litigation or other means. Students are also required to attend evening advice sessions during which they interview people attending for legal advice from volunteer solicitors. A daily tutorial and a weekly class provide an opportunity for discussion and analysis of the students' experiences, and for instruction in legal procedure and skills. There are also regular opportunities to attend Court and Tribunals. Major areas of work in which students will be involved include domestic violence, discrimination, consumer credit, victims compensation, family law, employment law, wills, legal aid and criminal justice issues. As well as clients files, students take part in community education, and in policy and reform work. The course is offered in both teaching sessions and over summer. A student who has enrolled in and who has passed or failed LAWS2303 Clinical Legal Experience (Intensive) may not enrol in this course without the approval of the Associate Dean. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2305

Clinical Program - Employment Law

Faculty of Law
UOC16 HPW16

Prerequisites: LAWS6210; LAWS2311

The Employment Law clinic requires students to undertake work for real clients while providing the student with opportunities to analyse the effect of the law in practice. Through their work for disadvantaged clients on

case, education and policy files students develop their understanding of substantive and procedural law and ethical issues in the area of employment. Students undertaking this Clinic will be working in a legal practice at Kingsford Legal Centre on employment law matters. They will be required to attend the Centre two days a week, 9am to 5pm, attend a weekly seminar of two hours and undertake evening and daytime public advice sessions. Students will be responsible for files under the supervision of the clinical supervisor. Students will conduct interviews with clients, make strategic decisions about conduct of the file, undertake research, draft all documents and where appropriate undertake advocacy in court or tribunals for the client. A daily tutorial and regular lectures provide opportunities for discussion and analysis of students' experiences and for instruction and development of ethical issues, employment law, legal procedure and skills. The course is offered in both teaching sessions and over summer. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2306

Aboriginal and Torres Strait Islander Social Justice Project

Faculty of Law
UOC8 HPW0

The Aboriginal and Torres Strait Islander (ATSI) Social Justice Project provides an opportunity for Indigenous undergraduate students to participate in a special project planned and developed with the Social Justice Unit within the Human Rights and Equal Opportunity Commission. Under the supervision and direction of the Social Justice Unit Indigenous students will conduct research, prepare written material and develop networks of organisations and individuals. This course is assessed on a Satisfactory/Unsatisfactory basis. In addition to the research and writing undertaken within the project, students must submit a journal of their activities to the supervising lecturer.

LAWS2307

Social Justice Intern Program

Faculty of Law
UOC8 HPW0

This program involves an internship for one day per week at one of the eight specialist centres associated with the Law Faculty. The principal goal is to provide students with training and practical experience in research, writing and advocacy on aspects of policy and practice relating to social justice (especially the reduction of inequality and exploitation).

LAWS2308

Public Interest Internship Program

Faculty of Law
UOC8 HPW8

The Law Faculty Public Interest Internship Program affords students the opportunity to undertake, for course credit, internships in selected Public Interest Host Organisations. The focus of the Program is on experiential learning. Students will work under the supervision of both the Host Organisation and the Faculty, and will obtain training and practical experience in research, writing and advocacy on aspects of policy and practice relating to any area of public interest law. This program is only offered to students in the final year of their Law program.

LAWS2311

Litigation 1

Faculty of Law
UOC6 HPW4

Pre-requisites: LAWS1001 and LAWS1011

Litigation 1 examines civil pre-trial procedure and criminal pre-trial procedure. Civil procedure focuses on Supreme Court actions and topics such as the legal constraints relating to who may be a party to an action, the types of process for initiating a case, pleading rules, serving court process, discovery and exchange of information between parties. Supreme and Federal Court Rules are examined to determine the extent to which they facilitate just, accurate and speedy resolution of disputes. The course examines problems of delay and cost in litigation with particular reference to alternative dispute resolution mechanisms, case management initiatives and the courts increasing control over the pre-trial litigation process.

Criminal pre-trial procedure involves an examination of the law (and related policing issues) associated with arrest, warrants, search of the person and of premises, police questioning of suspects, the admissibility of illegally obtained evidence and the fundamentals of drafting indictments and informations. Comparisons are drawn between the civil and the criminal pre-trial processes on many issues.

LAWS2312

Trial Process

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS2311, LAWS2321; or LAWS1010

An advocacy training course concerned with the procedural and practical aspects of trial litigation and focusing on the role of the lawyer. Preparation of cases for trial, from initial investigation to final submission. Major emphasis is given to developing skills of interviewing, collecting facts, examining and cross-examining witnesses, and addressing judges. Begins with a series of practice exercises simulating real life litigation problems and students initially play all the courtroom roles: lawyer, witness, orderly and judge. Concludes with a series of mock trials derived from actual cases and presided over by judges and barristers. The course is based upon the conduct of civil trials.

LAWS2313

Evidence and Advocacy

Faculty of Law
UOC8 HPW4

Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This course is designed to follow and expand upon the compulsory Litigation courses. Students are expected to know the fundamentals of evidence law and trial procedure. Evidence and Advocacy concentrates on the criminal trial and is designed to allow a hands-on approach to learning evidence law and developing expertise in trial practice and procedure. The advocacy component requires students, working in groups, to prepare cases for trial. Effectively, students will be learning what US advocacy writers have called 'case theory'. This is the pre-trial preparation of examination-in-chief, cross-examination, opening and closing addresses for trial.

The evidence component builds on students' basic knowledge of the doctrine, principles and rules relating to criminal litigation. Outside classroom hours students must attend criminal trials in progress to observe the conduct of judges, jurors, accused, witnesses and lawyers in real cases. Classroom discussion focuses on commentaries in the course text that examine a variety of issues associated with the dynamics of criminal trials. These commentaries are from a multidisciplinary perspective, incorporating the observations of historians, psychologists, sociologists and linguists. Course assessment includes witness examination exercises, trial presentations and an essay that is a comparative analysis of the conduct and practices of participants in observed trials with what the law expects, requires or assumes exists in relation to those participants.

LAWS2314

Dispute Resolution

Faculty of Law
UOC8 HPW0

Prerequisite: LAWS2311 or LAWS1010

Most legal education in common law systems scrutinises the interpretation and development of the law via decisions made by courts in the process of litigation. This fosters the assumption that litigation, or legal advice predicting the outcome of litigation, is the normal method of resolving disputes. In fact only a small proportion of disputes are resolved by litigation and there is a growing dissatisfaction with the cost, speed and adversarial character of litigation, and a corresponding interest in alternative forms of dispute resolution. This course reviews the development of the ADR continuum, identify key processes, analyse their comparative advantages and disadvantages, introduce students to the skills involved. Particular attention is paid to negotiation and mediation and students have the opportunity to participate in role plays using these processes. The course is delivered as an intensive program focussing on experiential learning.

Detailed information on the course is available at www.strategicaction.com.au/unsw

LAWS2315

Strategic Public Advocacy and Civil Society

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legal practitioners, particularly in civil society organisations, are often called upon to lead, or contribute to, public advocacy campaigns. An understanding of the public advocacy process is also valuable for the development and implementation of policy. The course addresses the interface between media, public relations, communications theory,

legislation and litigation in order to further public advocacy. It combines the theory and principles of public advocacy with the practical skills required to develop successful advocacy programs at local, state, national and international levels, and has relevance for advocacy on community development, environment, human rights, etc., without being exclusive to those areas. It is relevant for legal practitioners in civil society, government, semi-government instrumentalities, international agencies and organisations such as the UN.

LAWS2316

Expert Evidence

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

LAWS2317

Strategic Public Advocacy for Civil Society

Faculty of Law

UOC4 HPW0

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legal practitioners, particularly in civil society organisations, are often called upon to lead, or contribute to public advocacy campaigns. An understanding of the public advocacy process is also invaluable for those working in any policy area. The course addresses the interface between public law, media, public relations, marketing, political science, and litigation to further public advocacy. It combines theory and principles with the practical skills required to develop programs at local, state, national and international levels, and has particular interest for community development and social justice issues, without being exclusive to those areas. The course teaches an approach combining both project management and flexible creativity, and is relevant for legal practitioners in civil society, government, semi-government instrumentalities, and international agencies.

LAWS2318

The Principles & Practice of Trial & Appellate Advocacy

Faculty of Law

UOC4 HPW0

Prerequisite: LAWS2321; Excluded: LAWS2313

This 4 uoc course is designed for undergraduate students in their final year who have an interest in advocacy and/or litigation. It concentrates on the principles and practice of advocacy in the context of the rules of evidence, and follows on from the treatment of evidence and procedure in Litigation 2. The course has 2 aspects. After initial direction, the student will spend 2 days observing criminal trial advocacy and prepare firstly a synopsis (250 words), and then a course essay (2,500 - 3,000 words). The second aspect is classroom based and involves 7 three hour seminars addressing the constituent elements of case preparation and advocacy. Students will take part in practical advocacy exercises designed to reinforce teaching in key areas. On assessment, the essay, including its synopsis, will attract 40%, class participation 30% and practical advocacy exercises 30%. The course will be limited to 30-32 students.

LAWS2321

Litigation 2

Faculty of Law

UOC6 HPW4

Prerequisite: LAWS2311

Litigation 2 introduces students to the legal principles and rules relating to the presentation of evidence in court. The course provides a comprehensive examination of the rules of evidence (the accused at trial, prosecutorial obligations, relevance, the rule against hearsay, the treatment of unreliable evidence, proof, witness questioning, protections for vulnerable witnesses, tendency and character evidence). Litigation 2 emphasises the context of evidence law and procedure - including for example an examination of the role of the trial judge, the impact of adversarialism and the difficulties faced by the accused (particularly the unrepresented accused) and certain witnesses in the courtroom. The Evidence Acts 1995 (Cth) and (NSW) form the backbone to the course.

LAWS2323

The Criminal Trial

Faculty of Law

UOC4 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Criminal Trial builds on students' basic knowledge of the doctrine, principles and rules relating to criminal litigation. Outside classroom hours students must attend criminal trials in progress to observe the conduct of judges, jurors, accused, witnesses and lawyers in real cases. Classroom discussion focuses on commentaries in the course text that examine a variety of issues associated with the dynamics of criminal trials. These commentaries are from a multidisciplinary perspective, incorporating the observations of historians, psychologists, sociologists and linguists. Assessment is an essay that is a comparative analysis of the conduct and practices of participants in observed trials with what the law expects, requires or assumes exists in relation to those participants.

LAWS2331

Legal Theory

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

For details, see LAWS8320 Legal Theory earlier in the compulsory course section.

LAWS2332

Law and Social Theory

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

For details, see LAWS8820 Law and Social Theory earlier in the compulsory course section.

LAWS2335

Economic Analysis of Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The use of concepts of economics as a means of evaluating the appropriateness of legal rules. The concepts drawn from microeconomic theory and public economics (dealt with at a comparatively elementary level) are used to analyse existing and hypothetical legal rules within selected areas of law, such as property, tort, contract, constitutional law, environmental law, trade practices and business regulation, consumer protection and crime. Prior training in economics is not essential for students taking the course.

LAWS2341

Feminist Legal Theory

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Feminist analyses of law provide some of the most significant and challenging explanatory frameworks for understanding the practice and organisation of laws and legal institutions. This course examines the development of feminist legal thought, including a critical examination of feminist theorising about equality, power, the public/private divide, intersections between categories such as race, gender, disability, class and sexuality, and the representation of gendered identities within legal and popular culture.

This course explores the ways theory enhances our understanding of the potential of law to create and perpetuate inequalities, and the potential of theory to effect social transformation by creating new knowledge and understandings. It will also consider the usefulness and limits of feminist legal theory as an explanatory and transformative tool, with a focus on a range of substantive issues of particular relevance to Australian society. The course will encourage students to take a cross-disciplinary approach to the study of law, drawing on feminist work from disciplines such as sociology, criminology, philosophy, and cultural studies.

LAWS2361

Environmental Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines environmental law in both a theoretical and a practical sense. From the theoretical point of view, environmental law is

considered through interdisciplinary perspectives in a policy setting. The non-legal perspectives in terms of which environmental law is considered include ecology, economics and philosophy. The practical orientation of the course is toward developing an understanding of the legal framework for environmental decision making in Australia, particularly in N.S.W. Topics to be covered include the relevance of ecology to environmental law, environmental ethics, international environmental law, Commonwealth powers with respect to the environment, a range of Commonwealth and NSW legislation relating to the environment, and different legal techniques for enhancing protection of the environment (eg. regulation through the criminal law, through traditional common law techniques such as nuisance and private covenants, through economic incentive schemes, and through systems of consents and licenses). Litigation and alternative dispute resolution techniques are examined. Attention is also given to: (1) the part played by political and administrative discretion in the field of environmental decision-making, with some emphasis on the tensions which exist between various levels and bodies of government; (2) the role of public participation in the decision making process; and (3) environmental law in other countries, particularly the U.S. Students are encouraged to take an interest in topical environmental issues.

LAWS2391

Family Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines the constitutional framework of family law; marriage and divorce; the legal recognition and regulation of different types of domestic relationships and families, including de facto and gay and lesbian relationships; the resolution of disputes between married and unmarried domestic partners relating to care and custody of children, personal protection, property and maintenance; child support; legal status of children (including legal issues arising from artificial insemination and current techniques of assisted reproduction), and the rights and responsibilities of parents and others relating to children; adoption of children; and procedural aspects of family law, including the roles of lawyers and court counsellors.

LAWS2392

Children and the Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course is intended both for students who are interested in legal practice relating to children, and those who wish to broaden their understanding of the legal system by a critical examination of how it operates in a controversial and rapidly changing area. The present law in New South Wales is considered as well as the historical development of laws relating to children, proposed reforms, and comparative material from other jurisdictions. The materials draw on disciplines other than law (such as sociology, child development theory) so that legal developments can be related to the position of children in society and different perspectives on their rights and interests. There may be some variation in the topics to be covered, according to the interests of the particular teacher and students, but in general the course deals with the concept of children's rights; child welfare laws; the application of the criminal law to children and the jurisdiction and procedures in children's courts; education; foster care, and other forms of alternative care. It is desirable that students have completed LAWS2391 Family Law.

LAWS2393

Succession

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1081, LAWS1082; or LAWS3010

The law governing succession to property on death including the rules relating to wills, administration of assets, family provision and intestate succession. The law relating to death and the body is also part of this course. Equitable doctrines relating to the law of wills and administration of estates, including construction of wills, marshalling, satisfaction, and ademption are also studied. Emphasis is placed on Australia, but there is a significant comparative aspect to this course: Civil law systems, Aboriginal customary law and Islamic law of inheritance, inter alia. This is both an illuminating way of considering the relevant doctrines, and also is appropriate for practitioners in a multicultural country.

LAWS2394

Families, Property & Death

Faculty of Law

UOC4 HPW0

Prerequisite: LAWS1081, LAWS1082; or LAWS3010

This course covers some academic aspects of the law of Succession, that is, the law regarding the transmission of property from one generation to another, usually on death. It will not equip students to draft wills, but it will ensure their understanding of the framework within which will-drafting operates. It offers a fascinating insight into the impact of this area of the law on relationships, property and death.

LAWS2401

Health and Medical Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Health and Medical Law is a relatively new and growing discipline in Australia. This subject aims to provide a sound introduction to the law relevant to the health system, the delivery of health services and related scientific and technological developments. There is no one discrete area of law involved. Rather, several different areas of law apply, including torts, contract, discrimination law, criminal law, trade practices, equity, administrative law as well as substantial statutory provisions. As law is just one of the forces impacting on the delivery of health services social, ethical, political and economic issues will also be considered. An important aim of the course is to encourage and develop critical thinking and to challenge participants to consider the interaction between law and society. Hence, a range of carefully chosen relevant theory will be considered in relation to each topic.

Topics covered include patient rights, medical negligence, confidentiality and privacy, access to medical records, tissue transplantation, HIV/AIDS, genetics, assisted reproductive technology and surrogacy, end of life decision-making/euthanasia, research and experimentation, drugs and mental health. Although the subject will concentrate on the Australian jurisdiction, comparisons and contrasts will be made with other jurisdictions.

LAWS2411

Disability, Rights and the Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Real concerns have arisen in recent years about the rights of people with disabilities. This has resulted in the enactment of the Disability Discrimination Act 1992 (Cth) and in a number of legislative reforms at State level including the Guardianship Act 1987 (NSW) and amendments to the Anti-Discrimination Act 1977 (NSW). In order to understand these developments, this course examines the legislation in the light of the historical treatment of disability, both physical and intellectual, and critically evaluates the social construction of disability and the ensuing policies and practices. A variety of models explaining disability will be discussed and evaluated. The theoretical and legal context for disabilities will then be tested by an examination of a number of case studies. These may include case studies on integration in education, sexuality, medical treatment, employment and treatment in the criminal justice system. Finally, the role of law and social policy in facilitating change for people with disabilities will be considered.

LAWS2412

Discrimination and the Law

Faculty of Law

UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course deals with the law and policy of anti-discrimination and equal opportunity. The problem of arbitrary denials of equality to many different sorts of groups, in many different aspects of life, is one which is increasingly recognised. The law has an important role as an instrument of public policy in this area. The course examines legal mechanisms, particularly those in Australia, which seek to end or control discrimination. Some aims of the course are to provide a good working knowledge of Australian anti-discrimination law (broadly understood, and covering legislation), as well as informal means of dispute resolution and to encourage a critical assessment of the relevant law and its limits.

LAWS2413**Housing Law**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines residential tenancy law, practice and procedure with particular reference to the Residential Tenancies Act. Other relevant statutory provisions contained in the Strata Schemes legislation and Landlord and Tenant (Amendment) Act will also be examined. In addition, attention will be given to housing policies, the provision of public housing, strategies for dealing with homelessness, and tenancy law reform. There will be some focus on residential tenancy law and policy in other jurisdictions, as well as social theories of the built environment. Part of the assessment scheme will include attendance at, and a report on, the Consumer, Trader and Tenancy Tribunal.

LAWS2414**Social Security Law**

Faculty of Law
UOC8 HPW4

Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The role of the state in the provision of community resources, in particular in the redistribution of taxation revenue through the income maintenance system, and the role of law in the redistribution process. The major focus is an examination of the law, policy and practices of the Australian Social Security system. Other matters covered include: an examination of the causes and extent of poverty in Australia; the role of the state in the alleviation of poverty; the relationship between the Social Security Act 1991 (Cth) and other Commonwealth and State laws, such as the Income Tax Assessment Act 1936 (Cth); the Family Law Act 1975 (Cth) the Child Support legislation and common law and statutory compensation systems; the role of law in effecting social change in general and redistribution in particular. Some of these topics will be dealt with in outline only.

LAWS2421**Research Project**

Faculty of Law
UOC2 HPW0

This course permits individual students to undertake a research project upon a legal topic of their choice. The project will be undertaken in a topic area in which the student has studied or is already studying and where the research topic is undertaken in addition to assessment for that course. The indicative length of the Research Project is 2,500 words. The Research Project must have a clearly defined topic which has been approved by the academic supervisor of the project. The supervisor shall also examine the project. Unless the supervisor agrees otherwise, the final date of submission shall be the last day of the session in which the student is enrolled in the Research Project.

LAWS2422**Research Thesis: 16 uoc**

Faculty of Law
UOC16 HPW0

Enrolment in a Research Thesis shall be approved by the School of Law if: 1. A clearly defined project is proposed: the thesis topic must be approved at the outset but may be modified at a later stage. 2. The student has a sufficient academic background in legal study to enable the thesis to be completed in a satisfactory manner. (An average mark of 65% in previous law courses is normally required). 3. Adequate supervision is available: supervision may be conjoint but at least one supervisor should be a full-time member of the School of Law's academic staff. A group research project may be undertaken (but by no more than three students) if a statement of the proposed division of work among members of the group is approved in advance by the supervisor or supervisors.

The School of Law will initially limit its approval for a Research Thesis to the 8UOC enrolment (LAWS2423). A student who has received approval for the 8UOC enrolment may be given subsequent approval to transfer to a 16UOC enrolment (LAWS2422). Similarly a student who has received approval for a 16UOC enrolment may be given retrospective approval for transfer to the 8UOC enrolment.

Thesis: The thesis must be typed on A4 bond paper and two copies must be prepared in a cover (spring back folder or bound). References may appear at the foot of each page or at the end of each chapter. As a general rule the thesis shall be a maximum of 12,500 words for an 8UOC enrolment or 25,000 words for a 16UOC enrolment.

Examination: Each thesis shall have two examiners, one of whom may be the supervisor or one of the supervisors. Unless the supervisor or supervisors otherwise agree, the final date for submission shall be the last day of the session in which the student is enrolled in the Research Thesis. Examiners may require a candidate or group of candidates to attend an oral examination on the subject matter of the thesis; examiners may require a thesis to be resubmitted under such conditions as the examiners may determine.

* These electives permit selected students to obtain credit for approved research projects undertaken individually or in groups. No student shall be permitted to obtain more than 16 UOC in any combination of the subjects LAWS2422 and LAWS2423.

LAWS2423**Research Thesis**

Faculty of Law
UOC8 HPW0

LAWS2424**Research Thesis: Two Session Elective**

Faculty of Law
UOC8 HPW0

LAWS2425**Research Thesis**

Faculty of Law
UOC4 HPW0

LAWS2441**Law Journal**

Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Dean and the Faculty Advisers to the Law Journal, to have satisfactorily completed this course on the basis of work done as an editor of the University of New South Wales Law Journal.

LAWS2731**Comparative Criminal Justice: From Investigation To Trial**

Faculty of Law
UOC8 HPW0

Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This course introduces students to the aims and objectives of comparative law study, and the strengths and limitations of such an enquiry by focusing on aspects of criminal trial practice in various jurisdictions. Students will critically evaluate our criminal trial process by focusing on a number of themes, including: confessions and the right to silence, plea bargaining in different legal cultures, double jeopardy, adversarialism and the role of accusatorial justice etc.

LAWS4010**Business Associations 1**

Faculty of Law
UOC6 HPW4

Pre-requisite: LAWS1081

An introduction to a number of important legal and theoretical aspects of the operation of business corporations. In addition, there is a brief overview of partnership law. The corporate law component of the course falls into two parts. The first deals with the process and incidents of incorporation, including the derivation of the modern corporation and an introduction to regulatory structures; an introduction to the corporate constitution, organs and capital; the separate personality of the corporation and its exceptions. The balance of the course is concerned with the structure and governance of the corporation. It examines the corporate organs (the board of directors and the general meeting) and the division of corporate powers between them; the duties and liabilities of directors and other officers; the remedies available to shareholders for the enforcement of directors' duties and protection against oppression or overreaching by controllers. While much of this legal doctrine is equally applicable to the large corporation as to the small enterprise, the course stresses the problems, processes and transactions typically encountered by small incorporated businesses.

Note: If taken as an elective, it is LAWS1091 UOC8.

LAWS6210**Law, Lawyers and Society**

Faculty of Law
UOC6 HPW4

Currently enrolled in a program in the Faculty of Law.

This course is a course in applied legal ethics. It examines the different values, rules and regulation that affect legal practice. Students will (1) learn to identify the values, rules and norms that lawyers should apply in practice; (2) judge what roles lawyers do play in society and the justice system, and what roles lawyers ought to play; (3) identify and begin to develop the skills necessary for ethical practice. The course considers the lawyer-client relationship, the regulatory framework governing legal practice including the role of self-regulation, the role of lawyers as advocates including the responsibility of lawyers for access to justice and the special duties and roles of the criminal defence lawyer, the prosecutor, and the public interest lawyer.

LAWS7420

Advanced Legal Research

Faculty of Law

UOC2 HPW2

Co-requisite: LAWS2311 Litigation 1

This subject revises and expands upon students' legal research skills. It introduces students to more specialised legal research tools such as digests and loose leaf services, and also introduces students to some of the tools used in researching foreign and international law. There is considerable emphasis in this subject on the use of electronic research tools.

LAWS8008

Law and Bioethics

Faculty of Law

UOC8 HPW0

LAWS8320

Legal Theory

Faculty of Law

UOC6 HPW4

Pre-requisite: LAWS2160

The course is composed of two parts. In part one we discuss a number of basic notions associated with contemporary legal philosophy. These include - the nature of legal analysis, the separation of law from other areas of social life, the character of legal positivism, the role of the legal decision-maker, legal practice as an interpretive activity, the character of moral judgment, the difference in moral theory between the right and the good, liberalism as a political theory and its opponents, and liberalism's attitude to rights and to cultural difference.

In part two we apply some of these ideas to a number of 'problems' in contemporary legal practice. Just which problems varies from semester to semester but typical areas of study would be - human rights in East Asia, the legal response to cultural diversity, feminism and difference, legal responsibility, punishment, rights and judicial power, citizenship, the character of legal decision-making.

Note/s: If taken as an elective, it is LAWS2331 (UOC8)

LAWS8820

Law and Social Theory

Faculty of Law

UOC6 HPW4

Pre-requisite: LAWS2160

This course has to do primarily with interrelationships between law and other institutions and practices in society, particularly modern society; with what law does in society and what other elements of society do to it. These questions are approached, first, by examination of the great social theorists - especially Marx, Durkheim and Weber - who sought to explain the distinctive character of modern societies, and then by examination of transformations in contemporary law and society, and of different theoretical attempts to understand that law and those transformations. Those attempts include feminist and post-modernist analyses. LAWS8320 and LAWS8820 form part of the compulsory core of the LLB and BJuris degree courses with respect to students who entered the Faculty in 1981 or later. Students are required to take one of these two courses to fulfil compulsory requirements and are permitted to take the other as an elective.

Note/s: If taken as an elective, it is LAWS2332 (UOC8)

LEGT1711

Legal Environment of Commerce

School of Business Law and Tax

UOC6 HPW3

The entire fabric of commerce is woven from a complex legal regime, judicial and statutory, which regulates all commercial activity. This

subject deals with the Australian legal system; the Constitution and Commonwealth/State relations; Parliament and statute law; the courts and case law; the executive and administrative law; the legal process and alternative dispute resolution. Areas of substantive law relevant to commerce are examined including property law (with particular reference to intellectual property), torts law (with particular reference to negligence), contract law, criminal law, commercial entities and transactions, competition and consumer protection.

LEGT2712

Business, Ethics and the Law

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12UOC offered by Commerce and Economics or approval of the Head of School

Society increasingly demands ethical and social responsibility. This course provides an ethical dimension to the conduct of contemporary commerce in Australia. Although ethics exist independently of the law, legislative and common law developments are increasingly imposing higher standards of commercial morality. This course examines the conceptual basis of ethical behaviour, and the increasing attempts by the law to prescribe ethical behaviour, through a series of case studies drawn from disciplines within the Faculty's jurisdiction.

LEGT2721

Business Transactions

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711

Contract law forms the basis of all important commercial transactions and is essential to a proper understanding of more specialised areas of commercial law. This course examines the general principles of contract law and how they are developed and expanded in relation to specialised commercial transactions including agency, contracts for the sale of goods, guarantees, bankruptcy, negotiable instruments, securities and insurance law. Relevant areas of consumer protection and competition law are also discussed. The common contractual themes in which these areas are grounded will be highlighted, along with the different requirements attaching to the rights and obligations of parties to the transaction in such areas.

LEGT2731

Marketing and Distribution Law

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12UOC offered by Commerce and Economics or approval of the Head of School

The marketing and distribution of goods and services operates within a comprehensive regulatory framework. This course examines that framework. Topics include restrictive trade practices implications of distribution with special reference to collusive activity, exclusive dealing, resale price maintenance and abuse of market power; consumer protection and fair trading implications of sales promotion with particular reference to misleading or deceptive conduct and other unfair practices; advertising self regulation; product liability; protection of intellectual property; franchising, licensing and character merchandising.

LEGT2732

Franchising

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of Head of School.

Franchising is rapidly becoming the dominant force in the distribution of goods and services. This course examines the nature, development and significance of franchising in the Australian and international economies and addresses relevant legal and commercial issues. The legal nature and commercial implications of licensing arrangements to commercialise intellectual property are also examined.

LEGT2741

Business Entities

School of Business Law and Tax

UOC6 HPW4

Prerequisite: LEGT2721

The law relating to the legal structures available for business including partnerships, joint ventures, trusts and companies. The primary focus is

on the modern company and its operation under the Corporations Act. Topics include the nature of the corporate entity; establishing the company and fund raising; shares and dividends; the rights and duties of directors; the position of management; shareholders' rights and remedies for their enforcement; insolvency and liquidation.

LEGT2744

Corporate Fraud and Crime

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of Head of School.

Corporate fraud costs Australian business billions of dollars every year. This course examines aspects of fraud and corporate crime in their legal and commercial contexts. Topics include the analysis of the various laws relating to theft, fraud and other white collar crimes; the detection and investigation of fraud and associated issues including the powers of employers and law enforcement agencies, surveillance, and privacy; strategies for minimising legal exposure to fraud.

LEGT2751

Business Taxation

School of Business Law and Tax

UOC6 HPW4

Prerequisite: LEGT2721

The complexity and comprehensiveness of the Australian taxation system demands that tax considerations must be taken into account in most business decisions. An understanding of the structure of the Australian taxation system and of the policy factors that guide legislators is essential to professional business advisors. This subject concentrates on income taxation in Australia. Topics include: concepts of income; allowable deductions; tax accounting; taxation of partnerships, trusts and corporations; anti-avoidance provisions; tax administration; capital gains tax; fringe benefits tax.

LEGT2756

International Business Tax.

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or permission of the Head of School

This course discusses the principles relevant to international taxation and uses Australian international tax rules to highlight possible international tax policy choices and problems. Special emphasis is given to tax strategies relevant to international direct investment.

LEGT2761

Law of Banking and Finance

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of the Head of School

This course examines the regulatory environment for banking and finance with particular reference to lending transactions and the securities taken by all financial institutions that lend for profit. Topics include legal concepts underlying the bank-customer relationship and duties of banker and customer; foreign currency loans; consumer issues in lending; electronic banking; use and regulation of negotiable instruments (cheques, promissory notes and bills of exchange); corporate fund raising; domestic and international methods of fund raising.

LEGT2771

Information Technology Law

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or INFS1602

This course examines the laws governing information technology. The topics examined include intellectual property law - patents, copyright and confidential information; licensing; technology contracts; tortious liability; product liability; computer crimes; data protection and privacy; and current issues.

LEGT2791

International Business Law

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of the Head of School

Business today increasingly operates in an international market place. This course provides an introduction to the legal and commercial considerations affecting the conduct of business at an international level. Various types of international business activities and the more appropriate structures for them are considered, as are basic questions of finance, transport, property, intellectual property, fair trading and dispute resolution.

LEGT3001

Legal Aspects of Tourism

School of Business Law and Tax

UOC6 HPW3

Prerequisite: SERV1001; Excluded: TAHM3001

The tourism and hospitality industry operates within a comprehensive domestic, and international, legal and regulatory framework. This course examines that framework.

Topics include: national and international regulation of the travel and hospitality industry; consumer contracts law; the law of carriers and inns; the duties of travel operators and agents; travel insurance law; the law of bailment; the responsibilities of travel agents and tour operators; hotel management law; liquor licensing law; catering law; gaming law; marketing law; consumer rights and complaints; the law regulating payments (including international credit card payments); the finance of carriers and inns; criminal and civil liability of people working in the travel and tourism industry.

This course also examines the law regulating the issue of visa and travel documentation, and considers the liability of the operators, agents, carriers and government instrumentalities in relation to health and safety issues (including acts of terrorism).

LEGT3752

Capital Gains Tax

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751

Capital Gains Tax in Australia potentially applies to an exceptionally wide range of transactions. The disposal of assets, the creation of rights, the granting of leases and options, and the forfeiture and surrender of rights all involve Capital Gains Tax issues. This course examines the basic structural features of Capital Gains Tax in Australia. Issues concerning the scope of Capital Gains Tax and the boundaries between Capital Gains Tax and ordinary income are then examined through a series of business related case studies. The Australian approach to taxing capital gains is compared with the approach taken by some of our major trading partners and reform options are discussed.

LEGT3753

GST and FBT

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751

The first part of this course examines Goods and Services Tax (GST). Emphasis is placed on the practical operation of GST. Topics discussed include: registration; taxable supplies; input tax credits; adjustments; accounting for and documenting GST; treatment of GST free supplies; treatment of input taxed supplies; and anti-avoidance provisions. The second part of this course deals with Fringe Benefits Tax (FBT). Topics include: the calculation of FBT liability; the rationale behind grossing up the taxable value of fringe benefits; definition of fringe benefit; valuation rules for fringe benefits; exempt fringe benefits; reconciliation with income tax; treatment of income tax exempt employers; and the use of fringe benefits in salary packaging.

LEGT3755

Taxation of Business Entities

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751

Australia currently taxes the different types of business entities in ways that are consistent with their legal form. It follows that some economically equivalent business structures are treated quite differently from each other for tax purposes. Issues relating to the choice of a particular type of business entity and its operation produce tax planning opportunities and tax policy challenges. This course examines tax issues relevant to the creation, operation and termination of partnerships, trusts and companies. It places particular emphasis on a detailed examination of the dividend imputation system and on issues arising when dividend income moves

through a partnership, a trust or an interposed company. It also examines tax issues relevant to other selected business entities such as joint ventures, cooperatives, and superannuation funds.

LEGT3757**Corporate Tax Strategy**

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751

What are the tax implications of the different financing alternatives available to corporations? Are all the different methods of profit distribution from a company equally tax effective? How should a merger or a demerger be structured from a tax perspective? Why are the tax consequences of restructuring the capital of corporations? What are the implications of the tax consolidation provisions for corporate groups? What tax considerations might be relevant when undertaking a corporate restructuring? This course will examine these and similar questions through a series of case studies and simulation games.

LEGT3758**Taxation of Financial Products**

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751

This course deals with the taxation treatment of financial products. It examines the current classifications of financial products for tax purposes and the tax consequences that flow from those classifications. Topics dealt with include: public offers of equity and debt instruments; hybrid securities; discounted and deferred interest securities; derivatives; foreign exchange gains and losses; asset financing; lease financing; and international taxation issues associated with financial products.

LEGT4721**Special Topic in Business Law**

School of Business Law and Tax

UOC6

Prerequisite: LEGT1711 and approval from the Head of School

A specially assigned project, program or set of readings relating to research in business law.

LEGT4722**Special Topic in Taxation**

School of Business Law and Tax

UOC6

Prerequisite: LEGT2751 and approval from Head of School

A specially assigned project, program or set of readings relating to research in taxation.

LEGT4725**Contemporary Issues in Taxation**

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751 and approval from Head of School

This course examines selected contemporary issues in taxation research. Students are exposed to relevant research literature on the issues and researchers discuss the current and possible future directions of research in relation to those issues.

Note: only available to student undertaking B Com (Honours) in Taxation.

LEGT4726**Research Methods in Taxation**

School of Business Law and Tax

UOC6 HPW3

Prerequisite: LEGT2751 and approval from Head of School

This course aims to familiarise students with techniques and methods used in taxation research. The course examines electronic and hard copy resources for finding primary and secondary sources of taxation law. It also introduces students to the use of empirical methods in taxation research. The conventions of the discipline regarding the presentation of research findings in written form are also discussed.

Note: only available to students undertaking

B Com (Honours) in Taxation.

LEGT4900**Taxation Honours Thesis**

School of Business Law and Tax

UOC6

Prerequisite: LEGT2751 and approval from Head of School

Note: Only available to students undertaking B Com (Honours) in Taxation.

LIFE1001**Life Science Advanced Seminar 1**

Faculty of Science

UOC3 HPW2

An introduction to the professional abilities underlying key advances in research across the Life Sciences, and insights into how these advances impact on their fields and on society.

Examples of the latest research and future directions from a broad range of disciplines are examined critically, with fields covered including biomedical science, environmental science, biotechnology, and psychology. Library and WWW searches consolidate material, which focuses on research activities and facilities within the University, including laboratory visits and discussions with laboratory staff.

Note: Restricted to Advanced Science students.

LIFE2001**Life Science Advanced Seminar 2**

Faculty of Science

UOC3 HPW2

An introduction to the nature of research in the life sciences, theories of research process, research ethics, the nature of creativity in research, and the concepts of discovery and innovation. Literature and electronic information resources for research, collaboration, and written communication of science are introduced. Critical evaluation of scientific data and its presentation is discussed. Small group analysis of a specialised and innovative aspect of research.

Note: Restricted to Advanced Science Students

LIFE2101**Introductory Biochemistry & Microbiology**

School of Biotechnology and Biomolecular Science

UOC6 HPW6

Prerequisite: BIOS1201 and (CHEM1011 or CHEM1031) and (BIOS1101 or CHEM1021 or CHEM1041 or BIOS2021 or BIOS2621); Excluded: BIOC2101, BIOC2181, MICR2201.

Introduces modern biochemistry and the fascinating world of micro-organisms covering functional aspects of the structure and function of proteins; the biology, diversity and function of bacteria; and intermediary metabolism in micro- and higher organisms. Major topics include: the three domains of life (i.e. Eubacteria, Archaea and Eucarya) and viruses; the nature and function of enzymes; the metabolic working of cells, tissues and organs; the interrelationships between pathways of carbohydrate, lipid and amino acid metabolism; the vital roles of enzymes in catalysis and metabolic regulation; the energy-trapping mechanisms of micro-organisms, animals and plants; comparative aspects of microbial growth; bacteria biosynthetic pathways; bacteria and disease; the action of antimicrobial agents.

Note: Restricted to Bioinformatics Program

LING1000**The Structure of Language**

Linguistics

UOC6 HPW3

An introduction to general linguistics, focusing on the traditional core areas of language structure (phonology, morphology, grammar and semantics) and on the acquisition of language. This course is particularly recommended not only for those interested in the nature and structure of the English language, but also for those studying ESL or a foreign language.

LING1500**The Use of Language**

Linguistics

UOC6 HPW3

Examines how contemporary linguists deal with issues of language use, such as the nature of human communication, the influence of social attitudes on language, the principles of pragmatics, the historical development of languages, language universals and language typology,

the nature and evolution of writing, regional and situational variation in language.

LING2400

Language, Text and Context

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500; Excluded: ENGL2503, ENGL2820, LING3903

How does language make meaning? How can we critique and evaluate meanings made in texts? What is the role of ideology and social context in the construction of meaning? We will develop a set of analytical tools which focus on the lexis, grammar, and discourse patterns of a variety of texts from different genres and registers, including literary, academic, media, and everyday texts. Explores how language in use constructs social interpretations of our world(s) and positions readers in various ways.

LING2510

Analysing Talk

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500

Explores conversation and other forms of talk from an ethnomethodological perspective, with the main focus on how participants in conversation structure and organise their contributions and interactively construct meanings and activities in their talk. Special attention will be paid to methods speakers employ to distribute turns at talk, the ways in which the actions performed in these turns are coherently sequenced, how speakers and listeners deal with disagreements and disaligning talk (preference organisation) and with troubles in hearing, speaking and understanding (repair). Students will be required to transcribe a short conversation, and then analyse it in terms of one or more features of the talk that have been discussed in the class.

LING2530

Visual Communication

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500; Excluded: ENGL2821, ENGL3504, ENGL3550

Communication in contemporary society increasingly combines language with one or more different modalities, such as visual images, sound and spatial layout. Explores the techniques and theoretical frameworks useful in analysing how such multi-modal texts create meaning and construct positions for readers, and considers a range of texts from printed advertisements and magazines, to web pages, CD Roms, and public sites such as shops, museums and galleries. Aspects covered include the 'grammar' of visual images, the interaction of verbal and other modalities, ideological dimensions of multi-modal texts, literacy and access.

LING2540

Semantics and Pragmatics

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500; Excluded: LING2603

Considers the nature and scope of semantics and pragmatics and their place within linguistics. Begins with an examination of the nature of linguistic meaning. Particular attention is paid to the different theoretical approaches to lexical semantics, the relationship between semantics and grammar, and semantic change. Considers the way language is used in real world contexts and how meanings are shaped by contextual factors, such as who is speaking to whom, in what kinds of spatio-temporal and sociocultural situations. Includes an exploration of speech act theory, conversational maxims, politeness theory, and notions of context and culture.

LING2551

Contemporary English Grammar

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500; Excluded: LING2200, LING2550

Introduces the concepts, categories and terminology of English grammar, beginning with the parts of speech and progressing, through phrases and clauses, to the sentence and beyond. While the approach is traditional, it is informed by the work of contemporary grammarians. Applies the analytical methods presented to the analysis of texts representing a range

of genres, to issues of 'good' and 'bad' usage, and to the development of writing.

LING2590

The English Language: Its first Millenium

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500

Examines early English from the first written texts to the development of Standard English. Studies a variety of texts from the Old English & Middle English periods and considers how these differ from Modern English in sounds, sentence formation and vocabulary. Particular attention will be paid to exploring the reasons for the seeming illogicality of Modern English spelling.

LING2700

Social Contexts of Language Learning and Teaching

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500; Excluded: EDST2046

Examines socio- and geo-political forces outside the educational institution that shape which languages we learn, and how we learn them. Explores the concepts of global languages, linguistic imperialism, language death, language planning, and language birth, and examines the acquisition of the first language, bilingualism, and general factors affecting the choice and learning or acquisition of second and subsequent languages.

LING2900

The Linguistics of Signed Languages

Linguistics

UOC6 HPW3

Prerequisite: LING1000 or LING1500

Introduces the fundamental structure of natural signed languages, covering the essentials of signed language phonology, morphology and syntax, and examining the important features of all these levels of structure. Compares the basic properties of signed languages with those of spoken languages in order to see in which ways signed languages are similar to spoken languages and in which ways they differ. Examines signed languages in terms of their acquisition as first and second languages, and some sociolinguistic issues that arise for users of signed languages.

Note: Students do not need to be able to sign in order to take this course.

LING3000

Analysing Talk - Advanced

Linguistics

UOC6 HPW3

Prerequisite: LING2510

Develops some of the topics introduced in LING2510 (turn-taking, sequence organisation, repair) and analytic skills, as well as introducing some new topics (story and other extended turns, talk in institutional settings).

LING3001

Current Issues in English Grammar

Linguistics

UOC6 HPW3

Prerequisite: 12 units of credit at the LING2000 level; Excluded: LING2800

Explores current issues in descriptive grammar, including the distinction between structure and function, the nature of constituency, the language particular - language general distinction, the relationship between grammar and information packaging, the definition of word classes, and the description of subordination and coordination.

LING3002

Institutional Factors in Language Learning and Teaching

Linguistics

UOC6 HPW3

Prerequisite: LING2700 or EDST2046

Examines institutional and classroom factors related to language learning and teaching. Includes bilingual education and literacy, the history of language teaching methodology, and current trends in language teaching. Includes an investigation of how the elements of language (grammar, vocabulary, pronunciation) and the four skills (reading, writing, listening and speaking) can be taught.

LING3003**Theoretical and Descriptive Linguistics**

Linguistics

UOC6 HPW3

Prerequisite: 12 units of credit at the LING2000 level; Excluded: LING2500 and LING3900

Examines the various schools and movements in linguistics, including traditional approaches to language study, structural linguistics, generative linguistics, typological linguistics, functional linguistics and cognitive linguistics. Introduces students to some of the main theoretical and descriptive issues in contemporary linguistics.

LING4000**Linguistics Honours (Research) Full-Time**

Linguistics

UOC24 HPW5

Prerequisite: 54 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903 and permission of Head of Department

Honours (Research) students are required to prepare a thesis of between 15,000 and 20,000 words, which must be submitted by a date specified by the Department, and to complete two courses. Please refer to the list of courses under the entry for MA (Pass) in Linguistics (Applied).

LING4050**Linguistics Honours (Research) Part-Time**

Linguistics

UOC12 HPW3

Prerequisite: 54 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903 and permission of Head of Department

Honours (Research) students are required to prepare a thesis of between 15,000 and 20,000 words, which must be submitted by a date specified by the Department, and to complete two courses. Please refer to the list of courses under the entry for MA (Pass) Linguistics (Applied).

LING4500**Combined Linguistics Honours Full-Time**

Linguistics

UOC12 HPW2

Prerequisite: 48 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903

This program is undertaken in conjunction with one of the other Schools/Departments in the Faculty. Students are required to complete a research and seminar program acceptable to both the Linguistics Department and the other School/Department.

LING4550**Combined Linguistics Honours Part-Time**

Linguistics

UOC6 HPW2

Prerequisite: 48 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903

This program is undertaken in conjunction with one of the other Schools/Departments in the Faculty. Students are required to complete a research and seminar program acceptable to both the Linguistics Department and the other School/Department.

MANF0420**Production Management**

School of Mechanical and Manufacturing Engineering

UOC6 HPW6

Excluded: MANF4420, MANF4430, MANF4440

General principles of management: an overview of the basic ideas and issues of management including the functions and roles of a manager, strategic and operational planning and monitoring systems with an emphasis on production and operations management; classical and modern organisation theories; overview of human and cultural issues in organisations; issues of project management. Quantitative techniques for management: engineering economic analysis including the analysis of investment decisions under risk and uncertainty. Modern techniques of statistical quality control and its extensions to statistical process control. Project management and control using network analysis. Human and cultural aspects of management: motivation and leadership theory; organisational cultures; organisational change and development; TQM cultures and the "internal customer".

MANF1130**Introduction to Manufacturing**

School of Mechanical and Manufacturing Engineering

UOC6 HPW7

Excluded: MANF1100, MANF1110, MANF1120

The relationship between product design and manufacturing processes is introduced with theoretical and practical classes. Description and elementary analysis of manufacturing processes such as forming from liquid or solid and material removal. Introduction to non-metallic materials processing. Introduction to drawing techniques for engineering communication which includes freehand sketching and orthogonal projections. Use of computer graphics for modelling and production of detailed drawings of components. Elementary functional analysis of product design for manufacturing and performance. Practical training of approximately 33 hours will involve processes such as welding, fitting and machining as well as introduction to safety in a manufacturing environment.

Note: Protective items e.g. safety glasses, safety boots, overalls or dustcoat, etc are required for the practical training in order to comply with the Occupational Health and Safety Act. Students must possess these items before commencing this course. Students who have done appropriate technology-based courses at school or who have an appropriate trade or certificate qualification or are suitably employed, may seek an exemption for the practical training classes.

MANF3210**Product Manufacture**

School of Mechanical and Manufacturing Engineering

UOC6 HPW6

Prerequisite: MANF1120 or MANF1130 Corequisite: MECH2101, MECH2411

Design for economic manufacture. Geometric analysis of product designs and the technology and economics of manufacturing and assembly processes. The principle and technology underlying dimensional metrology for quality product manufacture. The analysis provides a basis for rational process selection and the refinement of product design to suit the chosen manufacturing methods.

MANF3300**Design of Manufacturing Facilities 1**

School of Mechanical and Manufacturing Engineering

UOC6 HPW4

Corequisite: MANF3210, MANF3420, MANF3500, MATH2839

The design of workplaces including jigs and fixtures where operations such as assembly and measurement are performed by a human operator or robot. Documentation of manufacturing processes, characteristics of human operators and robots, workplace and methods design. Measurement of workplace element characteristics.

MANF3420**Industrial Experimentation**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MATH2839

Statistical design and analysis of experiments to investigate the quality of products and the performance of manufacturing processes. Experiments of comparison, classical correlation and regression analysis, multiple linear regression analysis, accelerated experiments, analysis of variance.

MANF3500**Computers in Manufacturing 1**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: ELEC0807, MANF1130, MECH1500

Selection and use of computer-controlled devices such as robots and machine tools in manufacturing systems: principles of numerical control and PLCs, NC machine tools, NC programming, CNC/AC/DNC computer controls, accuracy of NC machines, fundamentals and applications of robots.

MANF3601**Manufacturing Operations Analysis A**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MATH2839, MECH1500

Principles and techniques of Operations Research and Analysis including linear and non-linear programming; basic queuing theory and stochastic processes; heuristic techniques; applications to manufacturing.

MANF3602

Manufacturing Operation Analysis B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MATH2839, MECH1500

Introduction to simulation; use of simulation packages; experimental design in simulation. Simple data modelling and information systems design; running an information system in conjunction with a factory simulation model.

MANF4011

Analysis of Manufacturing Systems A

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Students will work in project teams to perform a complete manufacturing system design and analysis, involving activities such as: design for manufacture, process selection, tolerance optimisation, workplace design, factory layout, production control system, detailed budget. A satisfactory grade in this course is provisional pending successful completion of MANF4012.

MANF4012

Analysis of Manufacturing Systems B

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MANF4011

Further project work, continuing from activities in MANF4011 Manufacturing Systems A.

MANF4300

Design of Manufacturing Facilities 2

School of Mechanical and Manufacturing Engineering

UOC6 HPW4

Corequisite: MANF3300

Introduction to plant layout design, materials handling and assembly systems. Use of ergonomic design for man/machine tasks. Analysis and simulation of various types of manufacturing facilities.

MANF4430

Management for Engineers

School of Mechanical and Manufacturing Engineering

UOC6 HPW6

Excluded: MANF0420

General principles of management: an overview of the basic ideas and issues of management including the functions and roles of a manager, strategic and operational planning and monitoring systems with an emphasis on production and operations management; classical and modern organisation theories; overview of human and cultural issues in organisations; issues of project management. Quantitative techniques for management: engineering economic analysis including the analysis of investment decisions under risk and uncertainty. Modern techniques of statistical quality control and its extensions to statistical process control. Project management and control using network analysis. Human and cultural aspects of management: motivation and leadership theory; organisational cultures; organisational change and development; TQM cultures and the "internal customer".

MANF4440

Strategic Manufacturing Management

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MANF3420, MANF3602

Industry dynamics; Porters model, the value chain and forms of competitive advantage; matching manufacturing strategy to the market; core competencies and process positioning; focused manufacturing; vertical vs horizontal integration; supply chain management, global manufacturing and the virtual corporation; matching performance measures to strategy.

MANF4500

Computers in Manufacturing 2

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MANF3500

Integration of the basic elements of manufacturing facilities into systems: selection of automation equipment, principles of group technology and cellular manufacturing, Flexible Manufacturing Cells, planning and layout of Flexible Manufacturing Systems, integration of CAD and CAM, computer integrated manufacturing, computer aided process planning.

MANF4601

Computer Aided Production Management A

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MANF3601

The dynamics of material flow through a manufacturing system; basic and advanced techniques of production planning and control and their realisation within a factory simulation model; matching different approaches to different types of manufacturing situations.

MANF4602

Computer Aided Production Management B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MANF3602

Use of decision support and knowledge based systems in production management; designing a production management database; types of integration and integrated decision making; implementation of these concepts with a factory simulation model.

MARK1012

Marketing Fundamentals

School of Marketing

UOC6 HPW3.5

Major concepts and theories relevant to the study and practice of marketing are introduced. Topics include the changing global marketplace, marketing processes and planning, the use of market research, an understanding of consumers and customers, decision-making and the marketing mix, market segmentation, positioning and product differentiation. This introductory subject prepares students for further study across the broad spectrum of product, service, consumer, business-to-business, industrial, global and social marketing.

MARK1014

Customer Relationship Management

School of Marketing

UOC6 HPW3

Customer Relationship Management (CRM) lies at the heart of marketing and management consulting. It has long been the backbone of industrial, trade, purchasing and services marketing, and the trend in recent years has been to use CRM techniques in dealing with final consumers as well. A purpose of the course is to develop relationship-building skills, in areas such as personal selling, direct marketing and commercial negotiations. Another goal is to demonstrate the role of new technology in widening the scope and potential of CRM, especially through the use of interactive and personalisation technologies. Topics include: CRM, loyalty and retention marketing; traditional methods of direct marketing and personal selling; commercial negotiations for lasting results; technology-based methods of relationship-building with customers, including interactive and e-customer management; permission marketing, data protection and privacy concerns. Exercises and cases are an integral part of the course, and this may require some flexibility with the timing of classes.

MARK2051

Consumer Behaviour

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK1012; Corequisite: MARK2052

The need for marketers to understand why consumers act as they do in the marketplace is the crux of this subject. Students are equipped with theoretical and conceptual knowledge of consumer behaviour, drawing heavily on both psychological and sociological viewpoints. This includes the psychology of individual decision-making and choice, patterns of behaviour exhibited by aggregate groups of consumers, and also the sociological and cultural influences on consumer attitudes and behaviour. This prepares students for making informed decisions about how to manage and respond to the needs and wants of consumers.

MARK2052

Marketing Research

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK1012; Corequisite: MARK2051

The sources and types of marketing information relevant to marketing management are examined, with the aim of developing an informed analytical approach to the study of consumers and markets. Topics include problem definition, research design, questionnaire design, sampling, basic numeracy, analysis and interpretation of data, reporting, and also management control of research, including briefing, evaluation of proposals and the distinction between research results and marketing implications. The use of continuous research and new developments such as automated and interactive forms of data gathering are discussed as well.

MARK2053

Marketing Communications and Promotions Management

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK2051; Corequisite: MARK2054

The aim is to offer insights into the various decisions and principles that marketing managers have to consider when developing an overall communications and promotions strategy. Key topics are the promotional mix, the design, implementation and evaluation of communications strategies and the need to make use of both creative and reasoning processes. An integrated approach is adopted, including an understanding of the role of media advertising, promotions, public relations, direct marketing and new interactive media. The course builds on knowledge of consumer behaviour and the analytical skills of marketing research.

MARK2054

Market Analysis

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK2052; Corequisite: MARK2053

This course links the analytical material of MARK2052 with practical issues in marketing management, including the analysis of competitive markets, product positioning, strategic analysis, demand forecasting and financial and budgetary aspects. The course is practical and data driven, with students exposed to specific tools and techniques using computer-based software. The importance to contemporary business of numeracy, problem-solving, measurement and analysis is a central theme, and is explored through exercises and tutorials.

MARK2055

Service Marketing & Management

School of Marketing

UOC6 HPW3

Prerequisite or corequisite: MARK1012.

Service industries now account for 70% of GDP and around 85% of all new employment. Intangible service products including professional (eg engineering, accounting, management consulting services) and other services (eg tourism, hotels, telcos, theatre, sport) possess a set of unique characteristics that require a different approach to the development & execution of marketing strategy. The course builds upon key frameworks and theories in marketing management and adapts them to the service sector. Key themes include the service encounter, service failure and recovery, the notion of the servicescape or service factory, customer service issues, core and supplementary service elements, service quality and customer satisfaction, and customer relationship management, and yield management as a pricing tool.

MARK2999

Industrial Training 1 (Co-op)

School of Marketing

UOC12

Prerequisite: MARK1012; Corequisite: MARK2052, MARK2052

Students consider the practical application of the fundamental principles of marketing in an industry environment.

MARK3071

International and Global Marketing

School of Marketing

UOC6 HPW3

Prerequisite: MARK1012

The purpose of this course is to develop a thorough appreciation of the international aspects of contemporary marketing. Topics include: conceptual and environmental aspects of international marketing; market entry strategies; managing marketing across borders; globalisation strategies, including global branding; developing practical marketing strategies for different world markets; how marketing theory needs to be

adjusted or extended for application in an international setting. Skills will be acquired through case analysis, teamwork and creative problem-solving.

MARK3072

Advanced Consumer Behaviour

School of Marketing

UOC6 HPW3

Prerequisite: MARK2051, MARK2052

The principles covered in MARK2051 are explored in a deeper and more questioning way. Content is focused on critical issues in consumer behaviour thought and practice, including an understanding of consumer choice processes, the effects of experience and learning, attitude formation, social networks and their impact on consumption, segmentation, brand management and communications processes. Issues are explored through theoretical frameworks, market research, experiments and detailed case studies.

MARK3081

Distribution Strategy & Retail Channels

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK2053, MARK2054

This course presents an integrated approach to distribution strategy and retail channel management. It addresses analytic, strategic and managerial aspects of distribution (the creation of product and service availability through marketing channels) and retail marketing (the management and marketing assortments of merchandise for direct sale to the consumer). Typically, topics include: marketing channel structure and functions, the retailing industry, channel design, channel structure, channel power and conflict, distribution intensity, retail product selection, assortment planning, retail buying, retailer's own brands, channel integration, wholesaling, franchising, strategic alliances in distribution, international retailing, non-store retailing, electronic retailing and electronic distribution channels.

MARK3082

Strategic Marketing Management

School of Marketing

UOC6 HPW3.5

Prerequisite: MARK2054, MARK3081

A course that integrates knowledge of market analysis with strategic business considerations, to achieve superior performance in sales growth, market share and profit contribution. Topics include: business definition, organisational strategy, and corporate policy; competitive and life-cycle strategies at the level of the business unit; portfolio analysis, diversification, and differentiation; social, ethical, technological, legal and global issues as they impact on marketing performance. Students draw on materials from all previous marketing courses and practical case studies.

MARK3091

New Product and New Service Development

School of Marketing

UOC6 HPW3

Prerequisite: MARK1012, MARK2051, MARK2052

A course focused on how to develop a business plan for a new product or service launch, having diagnosed a market opportunity. This involves an understanding of product-based competition and an appreciation of strategic options available to firms that are adept at development. Themes include: NPD processes, from setting a strategic framework for the development effort through to monitoring post-launch success; methods of market research and the use of analytical approaches such as perceptual mapping, benefit segmentation, trends unbundling and morphological analysis; screening and ranking processes to set priorities for development; converting concepts into prototypes; developing strategies and plans for the commercial launch. Some exercises may require flexibility with the timing of classes.

MARK3092

Brand Management

School of Marketing

UOC6 HPW3

Prerequisite: MARK2053, MARK2054

What brands are, how they are created and managed, and how they add value to consumers and the firm. Topics include: the importance of product, service and corporate brands; how awareness, loyalty, perceived quality, design, legal protection and the name itself combine to produce

brand equity; how these dimensions are tested, measured and valued; strategies and tactics for maintaining and reviving brands; multi-brand portfolios, extensions and brand architectures; brands as a driving force for standardisation and globalisation. Detailed case analysis is an integral part of the subject and this may require flexibility with the timing of classes.

MARK3209

Marketing Internship

School of Marketing
UOC6

Refer to School of Marketing for more information.

MARK3999

Industrial Training 2 (Co-op)

School of Marketing
UOC18

Prerequisite: MARK3081

Students consider the practical application of the fundamental principles of marketing in an industry environment

MARK4999

Industrial Training 3 (Co-op)

School of Marketing
UOC18

Prerequisite: MARK3999

Students consider the practical application of the fundamental principles of marketing in an industry environment

MARK7204

Thesis (Marketing) Part A

School of Marketing
UOC6

Prerequisite: Admission to BCom Honours in Marketing.

MARK7205

Thesis (Marketing) Part B

School of Marketing
UOC18

Note: Admission to BCom Honours in Marketing is required.

MARK7210

Business Research Methods in Marketing

School of Marketing
UOC6 HPW2

Prerequisite: Admission to BCom Honours in Marketing.

The research process - project management and research planning. The role of academic research and published material in the process of advancing marketing thought and knowledge. How to read, critique and prepare research proposals. Asking meaningful research questions: inductive and deductive approaches. Conjectures, propositions and hypotheses. Questions of proof, validity, reliability, robustness, representativeness, generalisability, scope, meta-analysis and marketing knowledge. The role of mediating and moderator variables. Preparing research designs to minimise error and bias. Formal research processes in specific analytical areas (such as Marketing Science, Economics Theory, and Consumer Psychology). The art of the solvable. Using this knowledge to write viable research plans.

MARK7211

Research Seminar in Marketing

School of Marketing
UOC6 HPW2

Prerequisite: Admission to BCom Honours in Marketing.

A study and critique of seminal published papers in selected marketing topics relevant to the interests of research students. Emphasis will be on appreciating the present state of knowledge, and considering future opportunities. Special attention will be given to the knowledge base in various substantive areas (for instance, international marketing, services marketing and service quality, brand management and relationship marketing). The focus will be on understanding the empirical significance of each article and its positioning, methodology and analytical approach. Also studied will be the writing and communication style - including the uses and abuses of narratives, tables, graphs and equations. Preparation of a conceptual journal article of a refereed standard will enable these ideas and concepts to be implemented.

MARK7212

Advanced Quantitative Methods in Marketing

School of Marketing
UOC6 HPW2

Prerequisite: Admission to BCom Honours in Marketing.

Extension of the knowledge of elementary statistics into the area of multivariate statistics, with special attention to the underlying theory and assumptions of the methods used. Discussion of multiple regression and multiple correlation, multivariate analysis of variance, discriminant and logit analysis, conjoint analysis, factor and correspondence analysis, and structural equation modelling. Hands-on practical sessions will enable participants to implement these tools, techniques and methods in the context of specific Marketing applications.

MARK7213

Contemporary Research Methods in Marketing

School of Marketing
UOC6 HPW2

Prerequisite: Admission to BCom Honours in Marketing.

The Marketing discipline - its origin, development and future direction. The use of different methods to examine research questions - quantitative, experimental, qualitative, and ethnographic approaches. Advanced survey-based methods. Experimental approaches to research in marketing, including experimental designs and analysis of variance. Consideration of non-quantitative methods - notably qualitative methods, in-depth interviews, case-study analysis, anthropological and ethnographic approaches, cross-cultural studies and phenomenological work. Post-modernist methods of enquiry.

MATH1000

Modelling Real World Phenomena

School of Mathematics
UOC3 HPW2

Introduction to the process of constructing mathematical models of real-world processes and situations. The emphasis is on seeking reasonable solutions to open-ended problems, not on the application of particular mathematical techniques. Examples will be taken from biology, finance, operations management, computer science, meteorology and other fields. Students will research a large project in teams and present a written and oral report on their results.

Note: Restricted to students in Advanced Science.

MATH1011

General Mathematics 1B

School of Mathematics
UOC6 HPW6

Excluded: MATH1031, MATH1131, MATH1141, MATH1151, ECON1202, ECON2291

Functions (and their inverses), limits, asymptotes, continuity; differentiation and applications; integration, the definite integral and applications; inverse trigonometric functions; the logarithmic and exponential functions and applications; sequences and series; mathematical induction; the binomial theorem and applications; introduction to probability theory; introduction to 3-dimensional geometry; introduction to linear algebra.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite. This course can be taken as a preparatory course by students who need to take MATH1131 but do not meet the assumed knowledge requirement.

MATH1031

Mathematics for Life Sciences

School of Mathematics
UOC6 HPW6

Excluded: MATH1011, MATH1021, MATH1131, MATH1141, MATH1151, MATH1231, MATH1241, MATH1251, ECON1202, ECON2291

Matrices and systems of linear equations. Functions and modelling. Differentiation. Exponentials and logarithms. Analysis of functions (limiting behaviour, maxima and minima, locating zeros). Functions of several variables. Interpolation and approximation. Discrete time dynamical systems. Complex numbers. Integration. Differential equations.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite.

MATH1041

Statistics for Life and Social Sciences

School of Mathematics

UOC6 HPW6

Excluded: MATH1049, MATH1059, MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, ECON1203, ECON2292

Probability, random variables, independence. Discrete distributions, Poisson and binomial distributions. Data analysis, Descriptive statistics. Sampling, Continuous distributions, the normal distribution. Estimation of mean and variance. Tests of hypotheses. Linear regression and correlation. Analysis of variance. Tests for goodness of fit. Bayesian statistics.

Assumed knowledge: As for MATH1031

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite.

MATH1081

Discrete Mathematics

School of Mathematics

UOC6 HPW6

Corequisite: MATH1131 or MATH1141 or MATH1151; Excluded: MATH1090.

Role of proof in mathematics, logical reasoning and implication, different types of proofs. Sets, algebra of sets, operations on sets. Mathematical logic, truth tables, syntax, induction. Graphs and directed graphs, basic graph algorithms. Counting, combinatorial identities, binomial and multinomial theorems. Binary operations and their properties, ordered structures. Recursion relations.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 100 in Mathematics and Mathematics Extension 1.

MATH1131

Mathematics 1A

School of Mathematics

UOC6 HPW6

Excluded: MATH1011, MATH1031, MATH1141, MATH1151, ECON1202, ECON2291

Complex numbers, vectors and vector geometry, linear equations, matrices and matrix algebra, determinants. Functions, limits, continuity and differentiability, integration, polar coordinates, logarithms and exponentials, hyperbolic functions, functions of several variables. Introduction to computing and the Maple symbolic algebra package.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 100 in Mathematics and Mathematics Extension 1.

MATH1141

Higher Mathematics 1A

School of Mathematics

UOC6 HPW6

Excluded: MATH1011, MATH1031, MATH1131, MATH1151, ECON1202, ECON2291

As for MATH1131 but in greater depth.

Assumed knowledge: HSC Mathematics Extension 1 and Extension 2. Students will be expected to have achieved a combined mark of at least 186 in Mathematics Extension 1 and Extension 2.

MATH1151

Mathematics for Actuarial Studies and Finance 1A

School of Mathematics

UOC6 HPW6

Excluded: MATH1011, MATH1031, MATH1131, MATH1141, ECON1202, ECON2291

Vectors and vector geometry, linear equations, matrices and matrix algebra, basic input-output linear models, determinants, least squares approximation, probability and statistics. Limits, continuous and

differentiable functions, mean value theorem, fundamental theorem of calculus, numerical integration, functions of several variables, introduction to Matlab.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 140 in Mathematics and Mathematics Extension 1 or 180 in Mathematics Extension 1 and Extension 2.

MATH1231

Mathematics 1B

School of Mathematics

UOC6 HPW6

Prerequisite: MATH1131 or MATH1141; Excluded: MATH1021, MATH1031, MATH1241, MATH1251, ECON1202, ECON2291.

Vector spaces, linear transformations, eigenvalues and eigenvectors. Introduction to probability and statistics. Integration techniques, solution of ordinary differential equations, sequences, series, applications of integration.

MATH1241

Higher Mathematics 1B

School of Mathematics

UOC6 HPW6

Prerequisite: MATH1131 CR or MATH1141CR; Excluded: MATH1021, MATH1031, MATH1231, MATH1251, ECON1202, ECON2291.

As for MATH1231 but in greater depth.

MATH1251

Mathematics for Actuarial Studies and Finance 1B

School of Mathematics

UOC6 HPW6

Prerequisite: MATH1151; Excluded: MATH1021, MATH1031, MATH1231, MATH1241, ECON1202, ECON2291.

Complex numbers, vector spaces, polynomial interpolation, linear transformations, Markov processes, eigenvalues and eigenvectors. Exact and numerical solution of ordinary differential equations, sequences, double integrals, Lagrange multipliers.

MATH2011

Several Variable Calculus

School of Mathematics

UOC6 HPW5

Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2039, MATH2049, MATH2100, MATH2110, MATH2111, MATH2510, MATH2610.

Functions of several variables, limits and continuity, differentiability, gradients, surfaces, maxima and minima, Taylor series, Lagrange multipliers, chain rules, inverse function theorem, Jacobian derivatives, double and triple integrals, iterated integrals, Riemann sums, cylindrical and spherical coordinates, change of variables, centre of mass, curves in space, line integrals, parametrised surfaces, surface integrals, divergence and curl, Stokes' theorem, Green's theorem in the plane, applications to fluid dynamics and electrodynamics, orthogonal curvilinear coordinates, arc length and volume elements, gradient, divergence and curl in curvilinear coordinates.

MATH2019

Engineering Mathematics 2CE

School of Mathematics

UOC6 HPW5

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610, MATH2120, MATH2130.

Partial differentiation and applications, vector algebra, double integrals, ordinary differential equations, introduction to vector field theory, extrema of functions of 2 variables, matrices and their applications, Laplace transforms, Fourier series, partial differential equations and their solution for selected physical problems.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2020

Mathematics 2A

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241

Revision of integration. Differential equations, use of Laplace transforms, solutions by series.

Note: MATH2020 and MATH2030 are intended for students who want to take no more than 6 units of credit in Level II Mathematics. If any other Level II courses in Mathematics other than Statistics courses are taken then neither MATH2020 nor MATH2030 will be counted.

MATH2029

Engineering Mathematics 2A

School of Mathematics

UOC6 HPW6

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2120, MATH2130.

Partial differentiation, ordinary differential equations, matrices, Laplace transforms, Fourier series, partial differential equations.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2030

Mathematics 2B

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241

Fourier series; multiple integrals, matrices and their applications to the theory of linear equations, eigenvalues; introduction to numerical methods.

Note: MATH2020 and MATH2030 are intended for students who want to take no more than 6 units of credit in Level II Mathematics. If any other Level II courses in Mathematics other than Statistics courses are taken then neither MATH2020 nor MATH2030 will be counted.

MATH2039

Engineering Mathematics 2B

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610.

Multiple integrals, vector calculus, extrema of functions of several variables.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2049

Mathematics and Statistics for Materials Science A

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610, MATH2841.

Statistics: graphical data analysis, random variables and their properties, normal and binomial distributions, functions of random variables and their simulation using computers, one and two sample inference methods, simple and multiple linear regression. Mathematics: functions of two variables, double integrals.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2059

Mathematics for Materials Science B

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2120, MATH2130.

Ordinary differential equations. Partial differential equations. Fourier series.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2060

Professional Issues and Ethics in Mathematics

School of Mathematics

UOC3 HPW2

Prerequisite: 24 units of credit in Math courses.

Professional and ethical issues and social responsibility in mathematics. The place of mathematics in the wider sphere of knowledge. Principles

and case studies in the ethics and responsible use of mathematics. Communicating mathematics effectively.

MATH2111

Higher Several Variable Calculus

School of Mathematics

UOC6 HPW5

Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of at least 70; Excluded: MATH2019, MATH2039, MATH2049, MATH2011, MATH2100, MATH2110, MATH2510, MATH2610.

As for MATH2011 but in greater depth.

MATH2120

Mathematical Methods for Differential Equations

School of Mathematics

UOC3 HPW2.5

Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2029, MATH2059, MATH2130.

Introduction to qualitative and quantitative methods for ordinary and partial differential equations. The following topics are treated with illustrative applications in physics, engineering and biology. Ordinary differential equations: first order, second order with constant coefficients, power series representations, the Frobenius method, the method of variation of parameters. Orthogonal functions and Fourier series. Sturm-Liouville problems. Eigenfunction expansions. Bessel's

equation. Partial differential equations: The method of characteristics. Classification. The method of separation of variables. The heat equation. The wave equation. Laplace's equation. Applications of Bessel functions and Legendre polynomials.

MATH2130

Higher Mathematical Methods for Differential Equations

School of Mathematics

UOC3 HPW2.5

Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of 70; Excluded: MATH2019, MATH2029, MATH2059, MATH2120.

As for MATH2120, but in greater depth, and with additional material on Green's function methods, nonlinear partial differential equations, Lie group methods and symmetry reduction.

MATH2140

Operations Research: Methods and Applications

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2160, MATH2180, ECON2208.

An introduction to modelling and solution techniques for linear optimization problems and their application to business and industry. Formulation of problems, the simplex method, duality and sensitivity analysis, integer programming using branch and bound, networks, transportation and assignment problems. Matlab will be used to solve realistic problems.

MATH2240

Introduction to Oceanography and Meteorology

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251

An introduction to mathematical models for the circulation of the atmosphere and oceans. The equations of motion are exploited so as to provide simplified models for phenomena including: waves, the effects of the Earth's rotation, the geostrophic wind, upwelling, storm surges. Feedback mechanisms are also modelled: the land/sea breeze, tornadoes, tropical cyclones. Models for large-scale phenomena including El Nino and the East Australian Current will be discussed as well as the role of the atmosphere-ocean system in climate change.

MATH2260

Dynamical Systems

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2200, MATH2220.

A comprehensive introduction to continuous time and discrete time dynamical systems. Differential equations and difference equations. Linear systems. Linearization of nonlinear systems Phase plane analysis.

Equilibrium fixed points and cycles, stability analysis and bifurcations. Dynamical modelling techniques with applications selected from environmental, physical, social and economic contexts.

MATH2281**Biomathematics**

School of Mathematics

UOC6 HPW4

Prerequisites: MATH1031 (DN) or MATH1231 or MATH1241 or MATH1251, Exclusions: MATH2280

Introduction to mathematical modelling and data analysis for biological and biomedical systems. Examples include: the formation of animal coat patterns, the spread of diseases through the community, the interaction between pathogens and the immune system of the body, the growth of tumours, nerve cell signalling, population dynamics, pharmacokinetics and bacterial growth. The emphasis in this course is on the development of the governing model equations and on computer simulations of the model equations rather than on mathematical methods for solving the model equations.

Note: Exclusions: MATH2280

MATH2301**Mathematical Computing**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251

An introduction to mathematical computing, programming and visualization using Matlab, with a focus on mathematical modelling and simulation. Introduction to Matlab, floating point arithmetic, difference equations, nonlinear equations, numerical differentiation and integration, initial value problems.

MATH2400**Finite Mathematics**

School of Mathematics

UOC3 HPW2

Prerequisite: MATH1081 or MATH1231 or MATH1241 or MATH1251

This is an introduction to those areas of Mathematics which underpin parts of computing. The main topics are integer and modulo arithmetic (including tests for primeness of integers), polynomial algebra (including factorization of polynomials and creation of new fields) and an introduction to cryptography and error correcting codes.

Note: MATH1081 Discrete Mathematics is recommended.

MATH2501**Linear Algebra**

School of Mathematics

UOC6 HPW5

Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2509, MATH2601.

Vector spaces, linear transformations, change of basis. Inner products, orthogonalization, reflections and QR factorizations. Eigenvalues and eigenvectors, diagonalization. Jordan forms and functions of matrices. Applications to linear systems of differential equations, quadratics, rotations.

MATH2509**Linear Algebra for Engineers**

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH2501, MATH2601.

Vector spaces, linear transformations, change of basis. Orthogonalization, least squares approximation, QR factorization. Determinants. Eigenvalues and eigenvectors, diagonalization. Singular value decompositions. Jordan forms. Matrix exponentials and applications to systems of differential equations.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2510**Real Analysis**

School of Mathematics

UOC3 HPW2.5

Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2039, MATH2049, MATH2011, MATH2111, MATH2610.

Multiple integrals, partial differentiation. Analysis of real valued functions of one and several variables. Fourier series.

MATH2520**Complex Analysis**

School of Mathematics

UOC3 HPW2.5

Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2620.

Analytic functions, Taylor and Laurent series, integrals. Cauchy's theorem, residues, evaluation of certain real integrals.

MATH2601**Higher Linear Algebra**

School of Mathematics

UOC6 HPW5

Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of 70 or greater; Excluded: MATH2501

As for MATH2501, but in greater depth, and with additional material on unitary, self-adjoint and normal transformations.

MATH2620**Higher Complex Analysis**

School of Mathematics

UOC3 HPW2.5

Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of at least 70; Excluded: MATH2520.

As for MATH2520 but in greater depth.

MATH2801**Theory of Statistics**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241 or MATH1251 (or, in program 3653, MATH1131 or MATH1141); Excluded: MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, MATH2901, BIOS2041, BEES2041, ECON2215.

Probability, random variables, standard distributions, bivariate distributions, transformations, central limit theorem, sampling distributions, point estimation, interval estimation, hypothesis testing.

MATH2829**Statistics SU**

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Introduction to probability theory, random variables and distribution functions, sampling distributions, including those of chi-square, t and F. Estimation procedures, including confidence interval estimation with an emphasis on least squares and surveying problems, and computer based exercises.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2831**Linear Models**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2801 or MATH2901; Excluded: MATH2931, BIOS2041, BEES2041.

Multiple linear regression models and examples. Graphical methods for regression analysis. Multi-variate normal distribution. Quadratic forms (distributions and independence), Gauss-Markov theorem. Hypothesis testing. Model selection. Analysis of residuals. Influence diagnostics. Analysis of variance.

MATH2839**Statistics SM**

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1021 or MATH1231 or MATH1241 or MATH1011 if in Program 3385; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Graphical data analysis. Review of probability, random variables and their properties. The normal and binomial distributions, the central limit theorem. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- test. Simple and multiple linear regression including data transformations to normality. Design and analysis of experiments, analysis of variance, introduction to factorial designs. Applications will be drawn primarily from the fields of mechanical and mining engineering and industrial design.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2841

Statistics SS

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1021 or MATH1031 or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2049, MATH2801, MATH2829, MATH2839, MATH1041, MATH2859, MATH2899, MATH2901, BIOS2041, BEES2041, ECON2215.

The goal in this course is to develop skills that are fundamental to data collection and analysis. These general skills are useful for anyone who needs to understand data, particularly science and information systems students. We focus on practical problems from research, business and the media that involve one or two variables. For such problems students should be able to: recognise what analysis procedures are appropriate, describe how to conduct a valid study, apply principles of probability theory, apply and interpret statistical procedures on a computer using SPSS, use a hand calculator for simple statistical procedures.

Note: This course is intended for students who want to take no more than 6 units of credit in Level II Statistics. It does not satisfy the prerequisites for any Level III Statistics course.

MATH2859

Probability, Statistics and Information

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241 (or, in program 3648 or 3651 or 3652 or 3653 or 3749, MATH1131 or MATH1141); Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Sample spaces, probability, random variables and probability distributions; examples of discrete and continuous distributions; Central Limit Theorem; statistical inference, confidence intervals and hypothesis testing; bivariate normal distribution, optimal mean square estimation, introduction to the multivariate normal distribution; linear regression and least squares estimation; inference in the linear model; on-line and off-line estimation; statistical quality control; models, applications and statistical algorithms relevant to the fields of computer, electrical, software and telecommunications engineering.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2871

Data Management for Statistical Analysis

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1041 or ECON1203 or ECON2292 or PSYC2001 or MATH1231 or MATH1241 or MATH1251 or equivalent.

The course covers the use of database and spreadsheet tools to organise and query statistical data, programming in an advanced statistical package for file management, data manipulation and cleaning; methods for data screening, cleaning, graphical displays and data analysis using a range of statistical procedures; creation of data analysis reports using modern statistical and graphical methods.

The course is based around Microsoft Access and Excel as well as the SAS statistical analysis system and programming tools. Knowledge and skills developed will be generic and applicable to a range of modern statistical software tools.

MATH2899

Applied Statistics for Chemical Engineers

School of Mathematics

UOC3 HPW3

Prerequisite: MATH1231 or MATH1241; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Graphical data analysis. Review of probability, random variables and their properties. The normal and binomial distributions, the central limit theorem. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- test. Simple and multiple linear regression including data transformations to normality. Design and analysis of experiments, analysis of variance, introduction to factorial designs. Applications will be drawn primarily from the fields of chemical, bioprocess and petroleum engineering. Statistical computing will be based on Matlab.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2901

Higher Theory of Statistics

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1231 or MATH1241 or MATH1251 (or, in program 3653, MATH1131 or MATH1141); Excluded: MATH2801, MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, BIOS2041, BEES2041, ECON2215.

As for MATH2801 but in greater depth.

MATH2931

Higher Linear Models

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2901; Excluded: MATH2831, BIOS2041, BEES2041.

As for MATH2831 but in greater depth

MATH3000

Mathematics/Statistics Project

School of Mathematics

UOC3 HPW2

Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay summarising the results of their project.

MATH3001

Mathematics/Statistics Project

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay summarising the results of their project.

MATH3002

Mathematics/Statistics Project

School of Mathematics

UOC12 HPW8

Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay of approximately 12,000 words summarising the results of their project.

MATH3041

Mathematical Modelling for Real World Systems

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Maths courses.

Why are no two snowflakes alike? When will the next major stock market collapse occur? Which is the greatest sporting nation on earth? Addressing real world problems involves the steps of formulating a mathematical description of the problem, solving the mathematical model, interpreting

the mathematical solution and critically evaluating the model. Motivated by real world problems, the course will survey mathematical techniques for: achieving the best possible outcomes, predicting future events and dealing with uncertainties. The course will provide introductions to popular mathematical resources for algebraic manipulation, numerical simulation and presentation. As part of the course requirements, students will be expected to work in groups on mathematical modelling projects and they will be expected to prepare a group report, both written and oral, describing the project. The course aims to equip students with the modelling skills and presentation skills for dealing with real world problems.

MATH3101

Computational Mathematics

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111 or MATH2510, and MATH2501 or MATH2601; Excluded: MATH3301.

Most mathematical models in engineering, finance and science are based on differential equations. In general these equations cannot be readily solved analytically. This course introduces computational methods for solving, to high accuracy, systems of both initial and boundary value problems for ordinary differential equations. There is a substantial computing component involving implementation of the methods and simulation of some mathematical models using the MATLAB software package on UNIX and Windows-based computer systems. Introduction to approximation of functions based on global interpolation and splines. Explicit and implicit computer methods for non-stiff and stiff initial value problems for ordinary differential equations. Introduction to the shooting, finite difference and orthogonal collocation numerical methods for boundary value problems. Direct computer algebra methods for matrix equations. Implementation of the modern computer methods using MATLAB Spline Toolbox and Ode Suite Package.

Note: This course includes a substantial computing component, and assumes some familiarity with Matlab.

MATH3121

Mathematical Methods and Partial Differential Equations

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111, and MATH2120 or MATH2130.

Fundamental methods for solution of ordinary and partial differential equations in applied mathematics, physics and engineering. Revision of separation of variables. Sturm-Liouville theory, eigenfunction expansions and generalised Fourier series, orthogonal polynomials. Bessel functions. Fourier and Laplace transforms. The method of characteristics. Introduction to Green's functions.

Note: MATH2520 or MATH2620 is recommended.

MATH3161

Optimization

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111 or MATH2510, and MATH2501 or MATH2601; Excluded: MATH3181.

Development, analysis and application of methods for optimisation problems. Theory of multivariable optimisation; including necessary and sufficient optimality conditions, stationary points, Lagrange multipliers, Kuhn-Tucker conditions, convexity and duality. Numerical methods for one dimensional minimisation, unconstrained multivariable minimisation (including steepest descent, Newton, quasi-Newton and conjugate gradient methods) and constrained multi-variable minimisation (including linear programming and quadratic programming).

MATH3201

Dynamical Systems and Chaos

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2120 or MATH2130, and MATH2501 or MATH2601.

Regular and irregular behaviour of nonlinear dynamical systems. A selection from topics developing the theory of nonlinear differential

and difference equations, with applications to physical, biological and ecological systems. Topics from: stability and bifurcation theory, Floquet theory, perturbation methods, Hamiltonian dynamics, resonant oscillations, chaotic systems, Lyapunov exponents, Poincare maps, homoclinic tangles.

MATH3261

Fluids, Oceans & Climate

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111, and MATH2120 or MATH2130; Excluded: MATH3241.

The dynamics underlying the circulation of the atmosphere and oceans are detailed using key concepts such as geostrophy, the deformation radius and the conservation of potential vorticity. The role of Rossby waves, shelf waves, turbulent boundary layers and stratification is discussed. The atmosphere-ocean system as a global heat engine for climate variability is examined using models for buoyant forcing, quasi-geostrophy and baroclinic instability.

MATH3311

Mathematical Computing for Finance

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2120 or MATH2130 and MATH2501 or MATH2601 and 6 units of credit in Level 2 Statistics.

In the end, finance is concerned with making definite numerical recommendations which frequently can only be made by analysing sophisticated models using high-speed computers. This course studies the design, implementation and use of computer programs to solve practical mathematical problems of relevance to finance, insurance and risk management. A review of MATLAB, floating point numbers, rounding error and computational complexity. A selection of topics from: approximation and parameter estimation, Fourier series and the FFT, finite difference approximations, partial differential equations (heat equation), sparse linear systems, non-linear algebraic equations, trees, Monte Carlo methods and simulation, random numbers and variance reduction, numerical integration. Computing environments for mathematical finance. Practical examples and programming assignments using MATLAB.

MATH3411

Information, Codes and Ciphers

School of Mathematics

UOC6 HPW4

Prerequisite: MATH1081 or MATH1090.

Discrete communication channels: information theory, compression and error control coding, cryptography.

MATH3521

Algebraic Techniques in Number Theory

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Math courses; Excluded: MATH3710, MATH3740.

The integers, residue class arithmetic, theorems of Lagrange, Fermat and Euler, groups of units, Chinese remainder theorem, primitive roots, Gaussian integers, division algorithm and principal ideals in $\mathbb{Z}[i]$, quadratic residues, algebraic number fields, extensions, Eisenstein's test, ruler and compass constructions.

MATH3531

Topology and Differential Geometry

School of Mathematics

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2111 or MATH2510 or MATH2610; Excluded: MATH3760.

Curves in the plane and what it means to be curved rather than straight. Curves in space and how they curve and twist. Surfaces and how they bend both internally and externally. Soap bubbles and minimal surfaces. Why a map of the earth must be distorted: Gauss' "Remarkable Theorem" and the Gauss-Bonnet Theorem. Euler characteristic and the platonic solids. Mobius bands and other surfaces. Classification and elementary combinatorial topology of surfaces. Topological spaces, fixed point theorems, Hairy Ball, Pancake and Ham Sandwich Theorems.

Note: Offered in odd numbered years only.

MATH3560**History of Mathematics**

School of Mathematics

UOC3 HPW2

Prerequisite: 6 units of credit of Level 2 Mathematics courses

The development of mathematical ideas has often been very slow and at times tortuous, but nearly always interesting. The finished product which is presented at secondary school and in University courses often hides much of the story which led to the development of the subject. This course is a pot-pourri of episodes from the long and fascinating history of the subject. It is of interest to anyone studying mathematics for its own sake, and is of special relevance to those planning a career in secondary teaching.

MATH3570**Foundations of Calculus**

School of Mathematics

UOC3 HPW2

Prerequisite: 12 units of credit in Level 2 Math courses; Excluded: MATH3610.

What does it mean for a limit to exist? What does it mean for a function to be continuous or differentiable? There are functions which are continuous everywhere but differentiable nowhere! Are there functions whose integral does not exist? In this course, we look again at the essential concepts of limit, continuity, differentiability and integrability and try to place them on a sure footing. The syllabus includes material on sequences and series of real numbers and also of real valued functions. Although of general interest to those studying mathematics for its own sake, this course is of special relevance to those planning a career in secondary teaching.

MATH3611**Higher Analysis**

School of Mathematics

UOC6 HPW4

Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2111 or MATH2011 (CR) or MATH2510 (CR), or permission from the Head of Department; Exclusions: MATH3570, MATH3610, MATH3620.

Limits and continuity are the central concepts of calculus in one and several variables. These concepts can be extended to quite general situations. The simplest of these is when there is some way of measuring the distance between two objects. Some of the most important examples of these 'metric spaces' occur as sets of functions, so this course looks at ways in which one might say that a sequence of functions converges. Taking these ideas one step further, we look at convergence which does not come from a generalized distance function. These are the ideas of point set topology. The course will include topics such as countability, continuity, uniform convergence and compactness, as well as an introduction to the core areas of function analysis. This will include the notions of Banach and Hilbert spaces, including Reproducing Kernel Hilbert Spaces which are important in Applied Mathematics, Statistics and elsewhere.

MATH3701**Higher Topology and Differential Geometry**

School of Mathematics

Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2111 or MATH2011 (CR) or MATH2510 (CR) and MATH2601 or MATH2501 (CR), or permission from Head of Department; Exclusion: MATH3690, MATH3700, MATH3531, MATH3760.

This course begins with a study of curves in space and how they bend and twist. It then considers surfaces, studying the first and second fundamental forms introduced by Gauss, the various measures of curvature and what they mean for the external and internal appearance and properties of surfaces. It continues by examining topological properties of surfaces, such as the Euler Characteristic, and proves the Gauss-Bonnet theorem relating the differential geometry to the topology. The final topics treated are chosen from homotopy, the Poincaré-Hopf theorem, Riemannian geometry, and the hyperbolic plane.

MATH3711**Higher Algebra 1: Group Theory**

School of Mathematics

UOC6 HPW4

Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2601 or MATH2501 (CR), or permission from the Head of Department; Exclusions: MATH3710, MATH3720.

In Higher Algebra, we will examine some of the basic notions of modern algebra that arose in the late 19th and early 20th century. The most fundamental notion is that of a group, which is how mathematicians

study symmetry. These will be studied in detail both from an abstract point of view and also to study symmetry in 3-dimensional space. The other important concept studied is that of a ring. The algebra of adding and multiplying matrices has many similarities with the algebra of numbers. The notion of rings generalise both these two examples.

Note: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling

MATH3801**Probability and Stochastic Processes**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2501 or MATH2601 and MATH2011 or MATH2111 or MATH2510 or MATH2610 and MATH2801 or MATH2901; Excluded: MATH3901.

Probability theory and random variables, convergence of random variables, Poisson processes, Markov chains. Continuous time Markov chains. Brownian motion and its applications, simulation of stochastic processes.

MATH3811**Statistical Inference**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2831 or MATH2931; Excluded: MATH3840, MATH3850, MATH3911, MATH3940, MATH3950.

Coverage of the main parametric and non-parametric and techniques used in statistics. Uniformly minimum variance estimation. Cramer-Rao inequality, Lehmann-Scheffe theorem. Monotone likelihood ratio distributions and uniformly most powerful unbiased tests. Generalised likelihood ratio tests, exact tests and large sample tests. Bayesian point estimation, interval estimation and hypothesis testing. Robustness and bootstrap resampling. Order statistics, goodness of fit, contingency tables. Statistical inference based on ranks. One sample, two sample and k-sample problems, blocked data, independence and association. Nonparametric regression.

MATH3821**Statistical Modelling and Computing**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2831 or MATH2931, MATH2810 or MATH2910; Excluded: MATH3800, MATH3810.

Use of major statistical packages such as Splus, SAS, Matlab. Model selection and regression diagnostics in multiple linear regression. Theory and application of generalised linear model and nonlinear regression. Applications of simulation in statistical inference. Resampling techniques. Nonparametric curve and density estimation.

MATH3831**Statistical Methods in Social and Market Research**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2801 or MATH2901; Excluded: MATH2840, MATH2940, MATH3931.

Development of statistical methods for design and analysis of data for social and market research. Review of research methodology. Sample survey design. Statistical aspects of survey design. Statistical aspects of questionnaire design and analysis. Estimation of means, totals, proportions and ratios. Estimation using auxiliary information. Methods for analysing cross-classified data, binary and ordinal responses, assessment, control and quantification of errors in survey research.

MATH3841**Statistical Analysis of Dependent Data**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH3811 or MATH3911; Excluded: MATH3820, MATH3870, MATH3920, MATH3941, MATH3970.

Development of statistical methods for analysis of dependent data arising in multivariate observations, time series and spatial processes. Multivariate normal distribution, Hotelling's T-squared, Wishart distribution. Discriminant analysis, principle component analysis, canonical analysis and factor analysis. Classification methods. Stationary and non-stationary time series models, autocorrelation, linear time series models, forecasting. Models for spatial processes.

MATH3851**Experimental Design and Categorical Data**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2801 OR MATH2901 AND MATH2831 OR MATH2931; Excluded: MATH2810, MATH2910, MATH3830, MATH3930

This course focuses on the principles of good experimental design and the statistical tools appropriate for discrete valued data. Topics include factorial designs and their analysis, response surface designs for product and process optimization, random effects models and components of variance, exploratory and graphical analysis of data using modern statistical packages, data visualization, analysis of cross-tabulated data, logistic and Poisson regression for analysis of binary and count data and log-linear models for contingency tables.

MATH3901**Higher Probability and Stochastic Processes**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2501 or MATH2601 and MATH2011 or MATH2111 or MATH2510 or MATH2610 and MATH2901; Excluded: MATH3801.

As for MATH3801 but in greater depth.

MATH3911**Higher Statistical Inference**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2931; Excluded: MATH3811, MATH3840, MATH3850, MATH3940, MATH3950.

As for MATH3811 but in greater depth.

MATH3931**Higher Statistical Methods in Social and Market Research**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH2901; Excluded: MATH2840, MATH2940, MATH3831.

As for MATH3831 but in greater depth.

MATH3941**Higher Statistical Analysis of Dependent Data**

School of Mathematics

UOC6 HPW4

Prerequisite: MATH3911; Excluded: MATH3820, MATH3870, MATH3841, MATH3920, MATH3970.

As for MATH3841 but in greater depth.

MATH4003**Mathematics and Computer Science Honours (Full Time)**

School of Mathematics

UOC24 HPW24

Undergraduate thesis in Applied Mathematics or Pure Mathematics together with advanced lectures on topics chosen half from MATH4103 or MATH4603, and half from Computer Science.

Note: To enter Mathematics Level IV, students must have completed a MATH major in the Science program, including at least 30 units of credit in Level III Mathematics, or have completed Stage 3 of one of the MATH plans in the Advanced Science program. In addition, students must have permission from the Head of the appropriate Department.

Students will normally be required to have a credit average in their Level III Mathematics courses and to have shown some evidence of the ability to undertake independent study. In special cases, other courses may be substituted for the Mathematics courses. Students should discuss their selection of Level III courses with the Head of the appropriate Department. Students must complete 48 units of credit of Honours Mathematics in order to be awarded an Honours degree.

MATH4004**Mathematics and Computer Science Honours (Part Time)**

School of Mathematics

UOC12 HPW12

Undergraduate thesis in Applied Mathematics or Pure Mathematics together with advanced lectures on topics chosen half from MATH4103 or MATH4603, and half from Computer Science.

Note: See notes for MATH4003.

MATH4012**Mathematics and Finance Thesis Project**

School of Mathematics

UOC12 HPW5

Under the supervision of a member of the academic staff of the School of Mathematics a student will undertake a major project in mathematics and finance. The project could range from reading and/or research on theoretical aspects to financial engineering involving implementation of a practical model in C/C++. Research interaction with the finance industry is encouraged. The student will write a thesis summarising the result of their project and make a presentation of it.

MATH4103**Applied Mathematics Honours (Full Time)**

School of Mathematics

UOC24 HPW24

Skill in practical numerical computing is highly recommended for students taking this course. Those students who have not already taken a suitable computing course may be required to take a short bridging course. Undergraduate thesis together with advanced lectures on topics chosen from the following fields: advanced mathematical methods for applied mathematics, advanced optimization, numerical analysis, theory of linear and non linear dynamical systems, optimal control, operations research, functional analysis and applications, mathematics of economic models and of economic prediction, fluid mechanics, oceanography, micro- hydrodynamics, and analytical and numerical solution of partial differential equations. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4104**Applied Mathematics Honours (Part Time)**

School of Mathematics

UOC12 HPW12

Skill in practical numerical computing is highly recommended for students taking this course. Those students who have not already taken a suitable computing course may be required to take a short bridging course. Undergraduate thesis together with advanced lectures on topics chosen from the following fields: advanced mathematical methods for applied mathematics, advanced optimization, numerical analysis, theory of linear and non linear dynamical systems, optimal control, operations research, functional analysis and applications, mathematics of economic models and of economic prediction, fluid mechanics, oceanography, micro- hydrodynamics, and analytical and numerical solution of partial differential equations. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4603**Pure Mathematics Honours(Full Time)**

School of Mathematics

UOC24 HPW24

Undergraduate thesis together with advanced lectures on topics chosen from the fields of current interest in Pure Mathematics. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4604**Pure Mathematics Honours (Part Time)**

School of Mathematics

UOC12 HPW12

Undergraduate thesis together with advanced lectures on topics chosen from the fields of current interest in Pure Mathematics. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4903**Statistics Honours (Full Time)**

School of Mathematics

UOC24 HPW24

Undergraduate thesis together with advanced lectures on topics chosen from the following fields: mathematical basis, experimental design, response surfaces, stochastic processes, theories of inference, sequential analysis, nonparametric methods, multivariate analysis, mathematical

programming, information theory, discrete distributions. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4904

Statistics Honours (Part Time)

School of Mathematics
UOC12 HPW12

Undergraduate thesis together with advanced lectures on topics chosen from the following fields: mathematical basis, experimental design, response surfaces, stochastic processes, theories of inference, sequential analysis, nonparametric methods, multivariate analysis, mathematical programming, information theory, discrete distributions. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATS1002

Microstructure Analysis

School of Materials Science and Engineering
UOC3 HPW3

Specimen preparation techniques; Principles of optical microscopy; Image analysis; Quantitative microscopy and stereology; Electron microscopy; Microchemical analysis.

MATS1013

Diffusion and Kinetics

School of Materials Science and Engineering
UOC3 HPW2

Unit 1 Diffusion

Staff Contact: Dr Nagarajan Valanoor

Fick's first and second laws; Solutions for short and long times by analytical and numerical methods; Boundary conditions for solid-fluid and solid-solid interfaces; Diffusion couples; Atomic level diffusion theory; Diffusion with variable D values, phase boundary migration and Kirkendall effect.

Unit 2 Kinetics

Staff Contact: Dr Haiping Sun

Elementary and non-elementary reactions; Reaction order; Activation energy; Irreversible and reversible reactions; Heterogeneous reactions; Kinetics of solid state-gas (fluid) reactions; Elementary steps; Rate-controlling step; Intrinsic kinetics; Chemisorption; Mass transfer in the gas phase and fluid; Multicomponent system; Knudsen diffusion; Shrinking core model.

MATS1021

Computing in Materials Science

School of Materials Science and Engineering
UOC3 HPW3

The aim of the course is to gain a basic understanding of the computing applications and practices that are relevant to materials engineering degrees and industry practice. Topics covered are: a brief overview of the place of computing in materials engineering; use of common materials software packages; using the internet as a part of the degree; search engines; email; website composition; and computer programming to solve materials based problems.

MATS1092

Materials and Design 1

School of Materials Science and Engineering
UOC3 HPW2

An appreciation of the relationships between the properties of materials, component design, manufacturing and product performance. Materials selection as an integral part of successful design. Long-term potential for materials improvement and substitution.

MATS1111

Materials Science 1

School of Materials Science and Engineering
UOC3 HPW3

Metals, ceramics, polymers and composites, their structure, chemical, physical and mechanical properties, engineering applications and production with particular reference to Australian industries. Role of materials science and engineering in materials industry. Information retrieval. Communication skills. Plant visits. Introductory materials laboratories.

MATS1112

Phase Equilibria

School of Materials Science and Engineering
UOC3 HPW2

Phase rule. Two-component systems: free energy-composition and temperature composition diagrams, solubility limits, compound formation, invariant points. Three-component systems: isothermal sections and liquidus projections. Solidification and crystallization; cooling curves, crystallization paths.

MATS1142

Crystallography and X-Ray Diffraction

School of Materials Science and Engineering
UOC3 HPW3

Introduction to crystallography, crystal structure, Bravais lattices, Miller indices, Miller-Bravais indices. Production, absorption, and diffraction of X-rays. Powder and single-crystal X-ray methods. Stereographic projection. Application of diffraction methods to solid solutions, thermal analysis, stress measurement, X-ray fluorescence spectroscopy, chemical analysis.

MATS1152

Materials Engineering 1B

School of Materials Science and Engineering
UOC6 HPW4

Materials process principles and engineering application. Steady and unsteady state material and energy balances. Heat transfer mechanisms such as conduction, convection and radiation. Principles of steady and unsteady heat transfer and application in the production and application of materials. Materials and heat flow involving high temperature solid, liquid and gaseous phases. Computer programming and application. Course examples are drawn from materials engineering practice in the broadest sense.

MATS1163

Chemistry of the Solid State

School of Materials Science and Engineering
UOC3 HPW2

Crystal chemistry, nature of bonding in solids, silicate structures, and structure-composition relationships. Glass and glass-ceramics. Reactions with solids, grain boundary and interfacial effects, ceramic reactions, and polymorphic transformations (oxides, non-oxides, aluminosilicates).

MATS1172

Physical Properties of Materials

School of Materials Science and Engineering
UOC3 HPW3

The particle and wave nature of matter; The Schrodinger equation; Electrons in a crystal: Zone and band theory; Fermi energy, Fermi surface and density of states; Electrical conduction in materials; Intrinsic and extrinsic semiconductors; Band-gap engineering; Basic semiconductor devices; Superconductivity and superconducting materials; Thermal properties of a solid: Heat capacity and thermal conduction. Magnetic behaviour: Basic concepts, modern theory and types of magnetism; Magnetic materials and applications.

MATS1214

Welding and Other Joining Processes

School of Materials Science and Engineering
UOC3 HPW2

Fusion welding. Capabilities, advantages and limitations. Metallurgical aspects of fusion welding. Cause of welding defects and weldability of carbon and alloy steels, stainless steels, aluminium and other common non-ferrous alloys. Design of welded fabrications to reduce distortion and the risk of failure by fatigue, brittle fracture, etc. Soldering, brazing, adhesive bonding.

MATS1223

Corrosion Control

School of Materials Science and Engineering
UOC3 HPW2

Topics covered: cost of corrosion; basic principles and classifications of corrosion; thermodynamics of corrosion; electrode kinetics; passivity and pitting; atmospheric corrosion; corrosion in soil and biological corrosion; corrosion under stress; liquid erosion failure and liquid metal embrittlement; high temperature corrosion and oxidation; designing against corrosion.

MATS1232**Materials Engineering 1A**

School of Materials Science and Engineering
UOC3 HPW3

Fluid flow in materials processing. Application of the principles of fluid flow in the production and application of materials. Examples are drawn from ceramic, materials and metallurgical engineering practices in the broadest sense.

MATS1244**Materials Industry Management A**

School of Materials Science and Engineering
UOC6 HPW4

Project Management: the stages of a project; planning; scheduling; personal dynamics; reporting; stakeholders; development of a project plan pertinent to the materials industry.

Accounting: financial accounting; development and analysis financial statements; ratio analysis; financial planning; finance; management accounting.

Career Development: self-promotion to gain employment; development of job applications and resumes; goal setting; performance appraisal; reward structures.

Marketing: market analysis; marketing concepts; product development.

Professional ethics

MATS1262**Mechanical Properties of Materials**

School of Materials Science and Engineering
UOC6 HPW5

Nature and significance of mechanical properties. Stress-strain relationships of metals, ceramics and polymers; oriented materials, textiles. Elasticity, anelasticity, plasticity, superplasticity. Young's modulus, Shear modulus, bulk modulus, Poisson's ratio. Creep, fatigue and visco-elasticity. Mechanical testing : tension, compression, hardness and impact tests. Stress and strain transformation. Mohr's circle. Fundamentals of stress analysis. Failure criteria. Application to materials' working processes.

MATS1282**Thermodynamic Materials**

School of Materials Science and Engineering
UOC6 HPW4

Pre-requisite/s: CHEM2718

Thermodynamic functions and systems - PVT system, stretched wire, paramagnetic solid, and electrolytic cell. The first and second thermodynamic laws in application to materials engineering. Phase transitions of first and second order. Ellingham and Pourbaix diagrams. Thermodynamics of solutions. Gibbs-Duhem equation. Thermodynamic activity. Perfect and regular metallic and ionic solutions. Thermodynamic stability. Calculation of phase diagrams. Calculation of chemical equilibria in complex systems.

MATS1343**Materials Industry Management B**

School of Materials Science and Engineering
UOC3 HPW3

Legal Issues in Management & Business: structure of the Australian legal system; the legal process and alternative dispute resolution; business law; contract law; restrictive trade practises; consumer protection; protection and exploitation of intellectual property.

Micro- and macro-economics: economic principles; supply and demand analysis; market structures; pricing and production; market failures and regulation; the business cycle and government policy; inflation and unemployment.

People management issues: diversity in the workplace: racial, gender, age, educational; leadership styles: leaders and managers, generic vs. trained, motivation, emotional intelligence; group behaviour and intergroup conflict.

Operations management: management principles; operational management; risk management and AS 4360; quality management and ISO 9000; continual improvement, environmental management and ISO 14000

Occupational Health and Safety: OHS management and AS 4801.

Course includes pertinent case studies and guest lecturers from industry.

MATS1354**Design Project**

School of Materials Science and Engineering
UOC3 HPW3

This project will cover the design of a selected piece of processing equipment or an engineering component. It will involve selection and specification of materials and other relevant aspects covered within the undergraduate program.

MATS1414**Surface Treatment and Wear**

School of Materials Science and Engineering
UOC3 HPW2

Coatings for corrosion prevention, engineering and decorative purposes. Adhesion. Surface modification. Specifications for coating systems. Selection, testing and evaluation of coatings. Classification of wear modes. Mechanisms of adhesive and abrasive wear. Selection, testing and evaluation of materials for wear mitigation. Wear-resistant materials.

MATS1464**Professional Communication and Presentation**

School of Materials Science and Engineering
UOC3 HPW2

Presentation skills: public speaking, presentation techniques, visual aids, library usage. Honours thesis: guidelines for thesis preparation, two oral presentations. Job search skills: curriculum vitae, cover letter, interviews.

MATS1902**Industrial Training A**

School of Materials Science and Engineering
UOC24

Industrial Training (Co-op IT. 2)

MATS1903**Industrial Training B**

School of Materials Science and Engineering
UOC24

Industrial Training (Co-op IT. 3)

MATS2013**Ceramic Materials**

School of Materials Science and Engineering
UOC3 HPW3

Excluded: MATS2313.

Geological origin and classification of ceramic raw materials. Composition, crystal structures, chemical and physical properties, and physical aspects of the production of ceramics and related materials. Chemical and physical reactions during processing and firing of traditional and advanced ceramics, cement, glass, refractories, and composites. Fabrication routes of commercial ceramic materials.

MATS2153**Ceramic Processing Laboratory**

School of Materials Science and Engineering
UOC3 HPW3

Laboratory program illustrating processing and engineering aspects of ceramic technology. Students are required to take part in a series of factory inspections.

MATS2183**Refractories**

School of Materials Science and Engineering
UOC3 HPW2

Classification of refractories. Chemical and physical properties of refractories. Introduction to raw materials and manufacturing technology. Description of chemical reactions occurring between refractories and solid, liquid, and gas phases in ferrous and nonferrous metal industries. Review of phase equilibria.

MATS2203**Physico-Chemical Ceramics Laboratory**

School of Materials Science and Engineering
UOC3 HPW3

Laboratory program illustrating the physical and chemical properties associated with the processing and performance of ceramic materials. Students are required to take part in a series of factory inspections.

MATS2263**Sintering of Ceramics**

School of Materials Science and Engineering
UOC3 HPW2

Introduction to sintering: definitions of sintering, brief history of sintering, driving forces of sintering, mass transport mechanisms, and atomic mobility. Solid-state sintering: mass transport mechanisms, stages of sintering, microstructure and processing considerations. Liquid-phase sintering: thermodynamic and microstructural considerations, liquid-phase sintering models. Reactive sintering processes: reactive sintering, reaction bonding, and transient-liquid phase sintering and reactive hot compaction. Pressure-assisted sintering: effect of pressure in sintering, deformation mechanisms, densification maps, and pressure-assisted sintering processes. Secondary phenomena: phase transformation, chemical reactions, and firing shrinkage and warpage. Introduction to sintering technology.

MATS2294**Thermal and Mechanical Properties of Ceramics**

School of Materials Science and Engineering
UOC3 HPW3

Heat capacity, measurement of heat capacity, and factors affecting heat capacity. Thermal expansion, measurement of thermal expansion, and factors affecting thermal expansion. Thermal conductivity, thermal diffusivity, measurement of thermal conductivity and thermal diffusivity, factors affecting thermal transport, phonon and photon conductivity, and factors affecting phonon and photon conductivity. Thermal stresses and thermal shock. Influence of structure and composition of pure materials on thermal conductivity of multiphase materials. Effects of composition, microstructure, and physical properties on the mechanical properties of ceramics, design approaches for ceramics, inspection and non-destructive testing of ceramics, and case studies.

MATS2314**Glass-Based Ceramics**

School of Materials Science and Engineering
UOC3 HPW2

Raw materials, glass compositions and types of glasses. Glass composition calculations. Glass forming processes. Design and construction of glass tanks. Electric melting. Fusion casting, crystal growth from melts. Relationship between composition and properties of glasses. Glass ceramics: compositions, melt forming, nucleation and crystallisation, and properties. Glazes and enamels: preparation of glazes, glaze calculations, design of glazes for bodies, chemical reactions, glaze body stress and defects, and porcelain enamels.

MATS2363**Ceramic Processing and Design**

School of Materials Science and Engineering
UOC3 HPW3

Prerequisite: MATS5013.

Forming of ceramics: forming processes and equipment used in traditional and technical ceramics, advanced forming processes, and forming problems. Drying of ceramics: review of the drying process, statics of drying (psychrometry), kinetics of drying, principles of dryer design, drying problems, and drying case studies. Firing of ceramics: review of chemical and physical processes, statics of firing (mass and energy balances on kilns), dynamics of firing and design of firing cycles, advanced kiln design, fast firing processes, and firing case studies.

MATS3064**Composite Materials**

School of Materials Science and Engineering
UOC3 HPW2

Philosophy of a composite. Fibre and matrix materials. Role of the interface. Polymer matrix, metal matrix and ceramic matrix composites. Physico-chemical characterisation. Strengthening and toughening mechanisms. Effect of reinforcement volume fraction. Size and size distribution. Properties of composites. Fabrication techniques. Design with composites. Applications.

MATS3443**Polymer Science and Engineering**

School of Materials Science and Engineering
UOC3 HPW3

Polymer structure, monomers, bond strength, addition/condensation polymerisation, amorphous, crystalline, conformation, chain branching,

co-polymer, additives in plastics, glass transition. Effect of molecular structure on performance, orientation, structure-property correlation, commodity and specialty plastics; application of polymers in ceramic industry, rheological behaviour.

MATS3524**Materials Engineering Project**

School of Materials Science and Engineering
UOC12

An experimental or technical investigation or design related to some aspects of materials engineering in the specific discipline (ceramic engineering, metallurgical engineering or materials engineering).

MATS3564**Polymer Engineering 1**

School of Materials Science and Engineering
UOC3 HPW3

Critical effects of temperature on behaviour of thermoplastics under load; Comparisons with thermosets; Factors contributing to strength and toughness; Yield, deformation and fracture; Crazing; Effects of environment.

MATS3574**Polymer Engineering 2**

School of Materials Science and Engineering
UOC3 HPW3

Strategies to reduce stress and increase toughness. Creep, recovery and stress relaxation. Time-temperature superposition, fatigue, selection of commodity plastics, engineering plastics and elastomers for particular applications. Degradation. Processing of polymers.

MATS3624**Materials Engineering Project**

School of Materials Science and Engineering
UOC9

An experimental or technical investigation or design related to materials engineering in the specific discipline (metallurgical engineering, materials engineering or ceramic engineering). Students with an average mark above 70 will be allowed to do the 24 UOC Project MATS3724, with approval from the Head of School.

Note: This course is 18 UOC in total: 9 UOC per semester over two semesters

MATS3724**Material Engineering Projects**

School of Materials Science and Engineering
UOC12

An experimental or technical investigation or design related to materials engineering in the specific discipline (metallurgical engineering, materials engineering or ceramic engineering). Only students with an average mark above 70 will be allowed to do this 24 UOC Project, with approval from the Head of School. Students with an average mark below 70 do the 18 UOC project MATS3624 AND ADDITIONAL 6 UOC Elective courses in Materials Science and Engineering.

Note: This course is 24 UOC in total: 12 UOC per semester over two semesters

MATS4013**Physical Metallurgy**

School of Materials Science and Engineering
UOC3 HPW3

Unit 1 Dislocations

Deformation of metals. Atomic and molecular description of deformation. Introduction to dislocation theory and its application to mechanical properties.

Unit 2 Phase Transformations

Solidification. Solid state transformations; diffusional and diffusionless transformations. Kinetics of phase transformations

Unit 3 Alloys

Steels and nonferrous alloys. Development of microstructure.

MATS4023**Phase Transformations**

School of Materials Science and Engineering
UOC3 HPW2

Theory of nucleation and growth of a new phase. Interface behaviour during solidification of single component systems. Alloy solidification - Interface stability and constitutional supercooling. Solidification by invariant transformation. Solidification of ingots and castings - Inoculation effects. Single crystal growth. Rapid solidification processing. Nucleation and growth of precipitates - age hardening. Spinodal decomposition and ordering reactions. Diffusional and diffusionless transformations - characteristics; nucleation and growth; crystallographic aspects. Case studies.

MATS4064**Thermomechanical Processing**

School of Materials Science and Engineering
UOC3 HPW2

Polycrystalline plasticity and origin of deformation microstructure; stored energy; mechanisms of dynamic and static restoration in materials; flow stress; superplasticity; nucleation and growth of new grains; kinetics; effect of purity, solutes and particles; control of grain size; grain growth and secondary recrystallization; deformation and annealing textures; anisotropy of mechanical and physical properties; case studies.

MATS4083**Physical Metallurgy of Alloys**

School of Materials Science and Engineering
UOC3 HPW3

Relationship between composition, thermal processing, phase equilibrium, microstructure and properties in ferrous and non-ferrous alloys. Carbon steels: heat treatment, including annealing, normalising, spheroidising, quenching and tempering, austempering and martempering. Cast irons: grey, white mottled malleable and ductile irons. Wrought and cast aluminium alloys, heat treatable and non-heat treatable aluminium alloys. Copper, low-alloy coppers, and copper alloys. Magnesium alloys. Lead, zinc and tin alloys.

MATS4084**Specialty Alloys**

School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS4013

Unit 1 Heat resisting alloys. Microstructure and properties of high temperature alloys based on iron, nickel-iron, nickel and chromium. Strengthening mechanisms. Creep, oxidation and hot corrosion. Coatings and protection. Process metallurgy and applications of high temperature alloys.

Unit 2 Light alloys. Production, processing, properties and development of titanium alloys. Advanced aluminium alloys. Rapid solidification of titanium and aluminium alloys. Powder processing of titanium and aluminium alloys. Advanced magnesium alloys.

Unit 3 Alloy Steels. Effects of alloying elements on phase equilibrium, kinetics of transformation and microstructure. Hardenability, tempering and embrittlement of quenched steels. Alloy engineering (constructional) steels, tool and die steels, corrosion and heat resistant steels, high strength low alloy steels.

MATS4133**Deformation and Strengthening Mechanisms**

School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS4013

Grain size dependence of strength, solute strengthening, work-hardening, age-hardening, strain ageing. Point defects and the role of point defects in strengthening. Creep, fatigue and high temperature deformation. Twinning. Interfaces.

MATS4213**Fractographic Analysis**

School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS4013

Classification of macroscopic and microscopic fracture mechanisms. Initiation and propagation of ductile, brittle, fatigue, stress corrosion, corrosion fatigue and hydrogen induced fractures. Effect of material defects, design deficiencies and incorrect processing on the origin and cause of fracture. Analysis of various modes of fracture using fractographic techniques involving optical microscopy and scanning and transmission electron microscopy. Non destructive testing techniques. Surface analysis techniques. Analysis of service failures.

MATS4333**Fracture Mechanics**

School of Materials Science and Engineering
UOC3 HPW2

Linear elastic fracture mechanics: modes of loading, stress intensity factor concept, effect of finite boundaries, energy release rate concept. Fracture toughness testing and evaluation; ASTM E399 and alternative specimen types. Subcritical fracture mechanics; fatigue, stress corrosion cracking. Elastic-plastic fracture mechanics; crack opening displacement, J-integral. Interface mechanics.

MATS5013**Materials Processing**

School of Materials Science and Engineering
UOC6 HPW6

Unit 1: Pyrometallurgical Processes

Staff Contact: Dr Haiping Sun

Roasting processes. Blast furnace and alternative ironmaking. BOF and EAF steelmaking. Steel refining. Aluminium smelting. Non-ferrous pyrometallurgical processes.

Unit 2: Metal Forming Processes

Staff Contact: A/Professor Alan Crosky

Deformation and workability. Hot working, cold working, recrystallisation. Casting, forging, rolling, extrusion, wire drawing. Processing defects and their avoidance.

Unit 3: Ceramic Processing Technologies

Staff Contact: Dr Owen Standard

Overview of unit operations in ceramic industries. Processing of ceramic raw materials. Ceramic forming processes. Ceramic drying and firing technologies.

MATS5033**Extractive Metallurgy**

School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS5013.

Unit 1 Hydrometallurgical Processes

Staff Contact: Dr Haiping Sun.

Application of principles of aqueous thermodynamics, electrochemistry, chemical and electrochemical kinetics to hydrometallurgical processes: leaching of minerals and concentrates, solution purification, precipitation, and other separation processes, ion-exchange and liquid-liquid extraction, electrowinning and electrorefining.

Unit 2 Light Metals Production

Bayer process. Thermodynamics and kinetics of electrochemical reactions. Aluminium smelting and refining. Hall-Heroult process and alternative technologies. Technologies for magnesium and titanium production. Economics and environmental issues.

MATS5043**Heat, Fluid and Mass Flow in Materials Processing**

School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS1232, MATS1152.

In-depth understanding of fundamental principles dictating transport phenomena in materials processing. Development of governing equations related to the transfer of fluid, energy and mass and their inter-dependence based upon fundamentals to analyse and solve problems encountered in current metallurgical operating environments. Application of the understanding developed to the emerging new technologies for metals processing such as direct reduction and smelting for iron making and near net shape casting.

MATS5113**Materials Engineering Laboratory**

School of Materials Science and Engineering
UOC3 HPW4

A laboratory program designed to illustrate property-structure-processing relationships in materials science and engineering through experimentation and analysis. Laboratory experiments are linked directly to lecture materials taught in MATS1013 Diffusion and Kinetics. MATS2013 Ceramic Materials, MATS3443 Polymer Science and Engineering, MATS4013 Physical Metallurgy, and MATS5013 Materials Processing. Students will be exposed to experimental methods and instruments used for materials characterization as well as processing techniques. Implicit

in this course is the cultivation of safe laboratory practices and good experimental techniques, and training in routine property measurements, methods of literature search, reliable data collection, data representation, elementary statistical analysis of data, and writing of technical reports. Two visits to selected manufacturing plants in the Sydney region are compulsory in the course.

MATS5253

Metallurgical Reaction Engineering

School of Materials Science and Engineering
UOC3 HPW2

Metallurgical reactor design: batch and continuous reactors. Gas-solid reactions. Limiting laws for gas-liquid reactions in steelmaking processes. Liquid-liquid reactions, design of extractive and refining operations.

MATS5323

Modelling in Materials Engineering 1

School of Materials Science and Engineering
UOC3 HPW2

Prerequisite: MATH1131 or MATH1231 or MATH2049 or MATH2059

The course introduces a range of numerical and analytical modelling techniques and then applies them to situations faced in materials science and engineering. Initially the pre-requisite knowledge is reviewed. Topics then covered are finite difference modelling and finite element modelling. These techniques are then applied to stress analysis, and heat transfer. A number of commercial software packages are introduced as well as designing computer programs to suit specific situations.

MATS5394

Pollution Control in Materials Processing

School of Materials Science and Engineering
UOC3 HPW2

Pollutants from the different industrial processes. Technical principles and equipment to control the emission of pollutants. Examples of various processes in the metallurgical, ceramic and chemical industries. Pollution control legislation specific to industry and compliance case studies.

MATS5413

Kinetics of Metallurgical Processes

School of Materials Science and Engineering
UOC3 HPW2

Prerequisite: MATS1013.

Application of kinetics of heterogeneous reactions to metallurgical processes. Roasting and solid state reduction processes. Calcination. Coal Gasification. Interfacial reactions, Ideal Langmuir isotherm and surface active elements. Reduction of iron oxides from molten slag. Steel decarburisation in BOF. Desulphurisation process. Nucleation and growth. Kinetics of solidification processes. Experimental techniques.

MATS5423

Pyrometallurgy 1

School of Materials Science and Engineering
UOC3 HPW4

Prerequisite: MATS5013.

Staff contact: Dr Haiping Sun

The course includes two units:

Unit 1: Extractive Metallurgy Laboratory, and

Unit 2: Metallurgical Plant Practice.

MATS5424

Modelling in Materials Engineering 2

School of Materials Science and Engineering
UOC3 HPW2

Principles of mathematical modeling. Types of mathematical models and their main components. Governing equations and boundary/initial conditions. Numerical techniques and computational fluid flow analysis. Application of commercial software packages. Dimensional analysis and application in physical modelling. Surface response methodology. Course examples are drawn from materials engineering practice in a broadest sense.

MATS5524

Pyrometallurgy 2 - Casting

School of Materials Science and Engineering
UOC3 HPW2

Prerequisite: MATS5013; Excluded: MATS1334.

Selected topics in ironmaking, steelmaking and nonferrous metallurgy. Electrometallurgy of steel. Ferroalloy making. Casting and solidification.

MATS9410

Materials for Mining Engineers

School of Materials Science and Engineering
UOC3 HPW3

Microstructure and structure-property relationships of the main types of engineering materials (metals, polymers, ceramics and composites). Micromechanisms of elastic and plastic deformation. Fracture mechanisms for ductile, brittle, creep and fatigue modes of failure in service; corrosion. Metal forming by casting and wrought processes. Phase equilibria of alloys; microstructural control by thermomechanical processing and application to commercial engineering materials. Laboratory and tutorial work includes experiments on mechanical testing, cast and recrystallised structures, ferrous and non-ferrous microstructures, wear, fracture and failure analysis.

MATS9520

Engineering Materials

School of Materials Science and Engineering
UOC3 HPW3

Microstructure and structure-property relationships of the main types of engineering materials (metals, polymers, ceramics and composites). Micromechanisms of elastic and plastic deformation. Fracture mechanisms for ductile, brittle, creep and fatigue modes of failure in service; corrosion. Metal forming by casting and wrought processes. Phase equilibria of alloys; microstructural control by thermomechanical processing and application to commercial engineering materials. Laboratory and tutorial work includes experiments on mechanical testing, cast and recrystallised structures, ferrous and non-ferrous microstructures, and fracture and failure analysis.

MATS9530

Materials Science for Mechanical Engineering

School of Materials Science and Engineering
UOC3 HPW3

Prerequisite: MATS9520

Materials used in Mechanical Engineering and related fields (Manufacturing Engineering Management, Aerospace Engineering, Naval Architecture) are discussed with emphasis on the dependence of properties and performance on microstructure. Aspects of materials selection during the design of engineering components that affect the service performance in applications, where failure can occur by brittle fracture, corrosion, creep or fatigue, will also be discussed.

MDCM1000

New Media Technologies A

School of Media, Film and Theatre
UOC6 HPW3

Prerequisite: Enrolment in program 3402 or 3994 or 4764

Introduces students to the field of media and communications through a consideration of the terms of its title, addressing notions of 'the new', 'media', and 'technology' in specific contexts. The history and technology of particular media forms, their spatiality and domestication, and issues of mediation and representation will be examined in relation to: photographic media, TV, and new computer-based media.

MDCM1001

New Media Technologies B

School of Media, Film and Theatre
UOC6 HPW3

Prerequisite: MDCM1000

Introduces students to multimedia production: text - and image-based. Students complete a series of short exercises using the resources of the multimedia laboratories and examine the cultural and social context of multimedia.

MDCM2000

Researching and Writing for New Media

School of Media, Film and Theatre
UOC6 HPW3

Prerequisite: MDCM1001

Studies formative innovative audiovisual texts and multimedia works. Introduces practices of researching and writing for audiovisual media and multimedia. Students concentrate on one area related to their

media production specialisation. Script writing conventions, genres and presentation formats will be studied, and creative works developed ready for production.

MDCM2002

Media Production

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: MDCM1001; Excluded: MDCM2001

Builds on the skills in multimedia production developed in MDCM1000/1001 by adding workshops in developing content from various audio-visual sources. Workshops cover the capture of video and photographic images, sound, illustration and techniques of interactivity.

MDCM2003

Multimedia Production

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: MDCM2002

Students learn video/audio postproduction and develop their ideas into multimedia works suitable for public exhibition. CD Roms, web-sites and video are produced in small groups, under supervision.

MDCM3000

Media Forms

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: MDCM2001 or MDCM2003; Excluded: MDCM3001, MEFT3105

The relationship between changing media forms and their techno-cultural contexts is studied. Various social and theoretical explanations are given for these relationships. Students are encouraged to develop a critical perspective on the issues together with an appreciation of the way in which forms develop and function in society.

MDCM3002

Advanced Media Production

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: MDCM2001 or MDCM2003; Excluded: MDCM3001

Focuses on writing for and pre-production techniques in multimedia for various genres - narrative, interactive and expository. Students work in small groups under supervision and study in depth various aspects of multimedia production in laboratory workshops.

MDCM3003

Multimedia Production in Industry Contexts

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: MDCM3002

Focuses on multimedia production work in genres studied in MDCM3002 and 3000. Students produce, individually or in pairs, short works in time-based media or in multimedia, suitable for publication or exhibition.

MDCM4000

Media and Communications Honours (Research) Full-Time

School of Media, Film and Theatre

UOC24 HPW5

Prerequisite: 54 units of credit in MDCM at an average of 70% and permission from Head of School

Consists of two seminars or equivalent in Session 1, a thesis workshop in Session 1, and a 15,000 word research-based thesis or a creative, research based media/multimedia project including a theoretical commentary of 5,000-6,000 words to complement the production.

MDCM4050

Media and Communications Honours (Research) Part-Time

School of Media, Film and Theatre

UOC12 HPW3

Prerequisite: 54 units of credit in MDCM at an average of 70% and permission from Head of School

Consists of two seminars or equivalent in Session 1, a thesis workshop in Session 1, and a 15,000 word research-based thesis or a creative, research based media/multimedia project including a theoretical commentary of 5,000-6,000 words to complement the production.

MDSG4001

Integrated Clinical and Community Studies

Faculty of Medicine

UOC24

Prerequisite: MDSG3001, PATH3101, PHPH3055

Objectives: By the end of Year 4, students will be expected to have mastered the skills in communication, history taking, and physical examination. Students will be able to generate a list of the patient's problems which includes the physical, emotional and psychosocial aspects of the case. For each problem, students will develop a plan for problem resolution. Students will learn much about management and drug treatment during Year 4 but only the principles of management and introductory aspects of therapeutics will be assessed at the end of Year 4. Students will be expected to interpret symptoms and signs in terms of disorders of structure and function; to understand the pathological basis of symptoms and signs; to know what special investigations are appropriate for the investigation of a problem and how to interpret the results; and to understand the social and preventative aspects of disease. The major component of the Year 4 program is the clinical attachments. While students will necessarily be assigned to subspecialty units (e.g. cardiology, neurology, etc.), the attachment is not designed primarily to teach the student the details of that discipline, but rather, the approach to a patient's problems and their resolutions, is to be emphasised. Structured teaching during clinical weeks will be limited. Pathology tutorials will be held each week, and one medical and one surgical lecture may be provided. A number of skills are to be acquired during Year 4 or 6 of the course and the acquisition of such skills will be noted in the student's logbook after an appropriate examination. By the end of year 4 students are expected to understand the health issues for populations especially disadvantaged groups and local communities. The social, environmental, economic and behavioural factors associated with illness, how the health system functions in the community, and how to assess the evidence for preventive care and population health interventions are also to be understood. For the 6 week population health term students will be attached to a clinical service which is community based or oriented for about 3 days per week. During this term they will also attend tutorials and workshops in evidence based preventive care and population health, critically appraise evidence, and work in a supervised group on a project about a community health issue. Systematic Pathology will be taught at all hospitals throughout the year and will be integrated with clinical teaching. The program includes one tutorial per week based on prepared clinical protocols (case presentations) which will explore the pathogenesis of those systematic diseases which were not covered in the context of Year 3 teaching in Pathology, or which require greater depth of coverage. Students will be required to prepare and expand on the topics listed, by reference to their own ward cases, by consultation with staff of the various departments in Pathology, as well as by reference to their recommended textbooks and specialised text or journal articles. Each student will be expected to attend a minimum number of autopsy demonstrations during the year. Additional exposure to Pathology will be attained by student attendance at Grand Rounds and Clinico-Pathological Conferences. Campus Weeks: All students will attend the University campus for three weeks throughout the year, during which lectures in Medicine, Surgery, Clinical Pharmacology, Pathology, and Population Health will be provided. Population Health teaching will utilise the knowledge and experience gained during clinical attachments to elucidate basic principles of epidemiology, public health, and continuing care. The Pathology lectures and demonstrations will concentrate on the pathogenesis of complex disease processes which cannot be effectively covered in a tutorial format. An excursion to the NSW State Government Forensic Laboratory and Coronial Courts is a compulsory activity. Where possible, days will be arranged so that a particular subject is approached in a multi-disciplinary way. A series of correlation clinics, held during campus weeks, will further emphasise the interdisciplinary approach to understanding a subject. Assessment: A multiple choice examination and a short answer paper will be given at the end of the year and will examine knowledge of Medicine, Surgery, Population Health, Clinical Pharmacology and Pathology discussed during the campus program and from the directed reading section in the syllabus. There will be two assessment tasks in the Population and Community Health term. Assessment of Pathology will also involve the submission of a project report and a viva examination. In addition to the written papers, a clinical short case examination will be held. Assessment will be based on the approach to clinical examination, eliciting of abnormal signs and the interpretation of their significance.

MDSG6001

Integrated Clinical Studies 6

Faculty of Medicine

UOC22

Prerequisite: MFAC5001, OBST5001, PAED5101, PSCY5001

Objectives: To build on the student's experiences in Years 4 and 5 of the course. To ensure that during clinical attachments in Year 6 students are capable of accepting additional responsibility within clinical teams. To ensure a smooth transition from medical student to Intern. To integrate knowledge and skills gained in the previous three years, so that the student's assessment, documentation and management of clinical problems is sufficiently mature and rounded to warrant graduation and provisional registration. To have students leave medical school committed to the importance of continued medical education. Year 6 of the new curriculum is fully integrated with the fourth year of the program. There are two campus weeks held during the year. The lecture, tutorial and correlation clinic programs build on knowledge of the disease processes gained in Year 4 and a special emphasis is placed on management, therapeutics and practical information needed for students who will soon commence work as Interns. Individual Principal Teaching Hospitals may strengthen the structured learning experience by providing additional lectures. However the time available for such additional programs will be strictly limited so that students are not diverted from their principal work on the wards. Five 6-week attachments complete the year. For one of the six week terms, students will be attached to an emergency room and an intensive care unit at a Principal Teaching Hospital, or a selected rural hospital. The remaining terms assigned to students will complement terms completed in Year 4. One medical and one surgical attachment will be provided at the student's Principal Hospital and a further term will be provided at a rural hospital. Students may request a specific program during the flexible fifth term of Year 6, providing their progress has been satisfactory. As in Year 4, clinical attachments provide an opportunity for learning on the job and the steady increase in the responsibility for patient management will be given to students as their experience and proven performance suggests that this is appropriate. On the wards, a significant emphasis will be placed on mastering procedural skills, therapeutics and such practical matters as interaction with ancillary medical staff and discharge planning. Assessment: For students to be eligible to sit the final examinations they must have performed satisfactorily in each of the Year 6 clinical attachments. At the end of Year 6, students will be assessed by means of a focused clinical case examination, a free ranging viva voce examination and a Multiple Choice Examination involving questions related to medicine, surgery, population health and clinical pharmacology. All three components of this examination must be passed.

MECH0130

Engineering Drawing and Solid Modelling

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Communication of form and layout of real world objects, solid modelling of objects. Engineering drawing layouts, orthogonal projections, dimensioning, tolerancing and standard drawing symbols, principles of detail design drawings and assembly drawings. Use of computer graphics and production of drawings.

MECH0330

Engineering Mechanics

School of Mechanical and Manufacturing Engineering
UOC4 HPW4

Excluded: CEIC1020, IDES1082, MECH1300

Composition and resolution of forces, laws of equilibrium. Friction. Statics of rigid bars, pin-jointed frames and beams. Simple states of stress. Statics of fluids. Rectilinear motion, curvilinear motion using rectangular and natural coordinates. Simple rotation. Equations of motion. Work, energy and power. Impulse and momentum.

MECH0440

Engineering Statics

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Excluded: CEIC1020, IDES1082, MECH0330, MECH1300

Composition and resolution of forces, laws of equilibrium. Friction. Statics of rigid bars, pin-jointed frames and beams. Simple states of stress. Statics of fluids.

MECH1120

Design and the Engineering Profession

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

To introduce the engineering profession; to assess abilities in written expression, to develop a consciousness of the importance of written, pictorial and oral expression in engineering life and to begin to develop

these skills; to begin to develop an awareness of the professional attitude. Introduction to engineering hardware and components; geometry, function, manufacture and reasons for various configurations. The design process, problem identification, search for solution concepts, nontechnical considerations in design, decision techniques, detail.

MECH1300

Engineering Mechanics 1

School of Mechanical and Manufacturing Engineering
UOC6 HPW4

Corequisite: MATH1131 or MATH1141 Excluded: MECH0330

Vectors, resultants, equilibrium. Systems of co-planar multiforce members. Mass centre, centroids, distributed forces. Friction. Applications to cables, screw threads, clutches etc. Plane particle kinematics: rectilinear, curvilinear and relative motion. Plane particle kinetics: equations of motion, work, energy, power, impulse, momentum, impact.

MECH1400

Mechanics of Solids 1

School of Mechanical and Manufacturing Engineering
UOC6 HPW4

Corequisite: MECH1300 or MECH0330 or MECH0440 Excluded: MECH0430

Resultants and equilibrium in three-dimensions; stress and strain; internal forces; stresses, deformation and strain energy due to axial loading, bending and torsion; helical springs.

MECH1500

Computing 1M

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Introduction: history, applications, hardware, software, a model of a computer system, editors, operating systems. Networking and the internet. Program design and development: programming objectives, data structures, algorithms, symbolic names, translation of algorithms, steps in programming, programming style, errors and debugging. Data: data types, declarations, input output, file control. Programming constructs: arithmetic expressions, assignments, relational and logical expressions, selection. Application in sorting, word processing, graphics and plotting, simultaneous linear algebraic equations.

MECH2101

Machine Design A

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MANF1130, MECH1400 Corequisite: MECH1120

Selection and specification of materials and manufacturing processes for engineering items. Communication by means of engineering drawing (including tolerances) of manufacturing information for simple components structures and assemblies. Application of standards and trade literature to design.

MECH2102

Machine Design B

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH1120, MECH2101 Corequisite: MECH2411

Design of common engineering components and systems. Simple design-and-build project to meet a published specification and to demonstrate achieved performance.

MECH2300

Engineering Mechanics 2

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MATH1231 or MATH1241, MECH1300

Kinetics of systems of particles; steady mass flow. Plane kinematics and kinetics of rigid bodies: moment of inertia; motion relative to translating and rotating frames of reference; equations of motion; work and energy, impulse and momentum. Virtual work for static and dynamic systems. Engineering applications.

MECH2411

Mechanics of Solids 2A

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MATH1231 or MATH1241 Corequisite: MECH1400

Revision of Statics. The variation with orientation of stress at a point in 2D, Mohr's circle. The variation with orientation of stress at a point in 3D given one principal stress. The variation with orientation of strain at a point, Mohr's circle, strain gauges. The relationships between stress and strain during linear elastic deformation. The interdependence of elastic moduli. The variation with orientation of stress at a point in the general 3D case. Octahedral stresses. Strain energy stored in a linearly elastic body resulting from volume change and from distortion. Yield criteria. Fatigue, stress concentrations, Miner's rule. Material properties and testing.

MECH2412**Mechanics of Solids 2B**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH2411

Simple bending and unsymmetrical bending of beams. Second moments of area. Bending of composite beams, reinforced concrete beams. Transverse shear stresses in beams. Shear centre. Combined stresses in beams. Column buckling. Membrane stresses.

MECH2611**Fluid Mechanics A**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MATH1131 or MATH1141, Corequisite: PHYS1169

Fluid properties. Fluids in static equilibrium. Buoyancy. Pressures in accelerating fluid systems. Steady flow energy equations. Flow measurement. Momentum analysis. Dimensional analysis and similarity. Pipe flow.

MECH2612**Fluid Mechanics B**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MECH2611 or MECH2601

Incompressible laminar and turbulent flow in pipes; friction factor. Laminar flow between parallel plates and in ducts. Elementary boundary layer flow; skin friction and drag. Pumps and turbines. Pump and pipe-line system characteristics.

MECH2711**Thermodynamics A**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MATH1131 or MATH1141, Corequisite: PHYS1169

Thermodynamic concepts, systems, property, state, path, process. Work and heat. Properties of pure substances, tables of properties and equations of state. First law of thermodynamics. Analysis of closed and open systems.

MECH2712**Thermodynamics B**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: MECH2711 or MECH2601

Second law of thermodynamics, Carnot cycle, Clausius inequality, entropy, irreversibility, isentropic efficiencies. Air-standard cycles. Vapour compression cycles.

MECH3000**Professional Responsibilities**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Professional ethics, responsibility, the environment, liability and intellectual property. Written communication and oral reporting.

MECH3091**Co-Operative Training A**

School of Mechanical and Manufacturing Engineering

UOC24

Prerequisite: 144 units of credit

Co-op scholars are required to do a 25 week period of industrial training in Session 1 of their Year 4. The location of the training is at the site of one of the sponsors of scholarships for that year. At the end of the training, they are required to submit a report on the training, which is evaluated by their academic mentor, and normally make a presentation on this topic at the company to company representatives and the academic mentor.

MECH3092**Co-Operative Training B**

School of Mechanical and Manufacturing Engineering

UOC24

Prerequisite: 144 units of credit

Co-op scholars are required to do a 25 week period of industrial training in Session 2 of their Year 4. The location of the training is at the site of one of the sponsors of scholarships for that year. At the end of the training, they are required to submit a report on the training, which is evaluated by their academic mentor, and normally make a presentation on this topic at the company to company representatives and the academic mentor.

MECH3101**Machine Systems Design A**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH2102, MECH2300, MECH2412 Corequisite: MECH3400

Mathematical modelling for design applications. Force flow through components and assemblies. Dynamically loaded bolted connections and welded joint design. Design of more engineering components and systems.

MECH3102**Machine Systems Design B**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH2102, MECH2300, MECH2412 Corequisite: MECH3300

Design of mechanical power transmission systems. Major design project involving broad engineering aspects, concurrent design and the interaction with other group members.

MECH3203**Engineering Experimentation A**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: ELEC0807, MECH2411, MECH2612, MECH2712

Scientific method, engineering method; experimental program; report writing; error analysis; principles of transducers; selection of instruments.

MECH3204**Engineering Experimentation B**

School of Mechanical and Manufacturing Engineering

UOC3 HPW2

Prerequisite: ELEC0807, MECH2411, MECH2612, MECH2712

Dynamic response of instruments; signal processing; digital data acquisition; interfacing transducers to computers; computer control of experiments; smart transducers.

MECH3211**Linear Systems Analysis**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MATH2029, MECH1300

Models of physical systems: differential equations for physical systems including mechanical, electrical, hydraulic, thermal and pneumatic systems; linearisation. System analysis techniques: solution by Laplace transform method. Transfer functions and block diagrams. System response: response of first and second order systems to impulse step, ramp, sinusoidal and periodic inputs; higher order system response; system stability, applications.

MECH3300**Engineering Mechanics 3**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MATH2029, MECH2300

Satellite motion. Gyroscopic torque. Geometry of gear tooth profiles; standard and non-standard gear proportions. Gear trains; epicyclic gears. Static and dynamic balancing of rotating and reciprocating mass systems. Kinematics and kinetics of mechanisms.

MECH3330**Vibration Analysis**

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MATH2029, MECH2300 Excluded: MECH2310, MECH3310, MECH9311

Introduction to mechanical vibration. Single degree-of-freedom spring-mass-damper systems; free and forced vibration; undamped/damped responses; vibration isolation; transmissibility. Harmonic analysis. Vibration measuring instruments. Linear vibrations of multi-degree-of-freedom systems; normal modes. Analysis of continuous systems. Wave equation. Transverse vibration of strings; longitudinal/torsional vibration of bars and rods; bending vibration of beams.

MECH3400

Mechanics of Solids 3

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH 2411, MATH2029, MATH2039

Introduction to theory of elasticity and torsion of prismatic bars. The virtual work principle and its application to deflection of beams and trusses. Introduction to the linear elastic fracture mechanics and crack propagation.

MECH3520

Programming and Numerical Methods

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH1500 Excluded: MANF3800, MECH3800

Programming language features essential to complex engineering calculations. Logic, control, arrays, functions and subroutines in FORTRAN. Application of numerical methods to solve non-linear equations, linear and non-linear systems, differencing schemes, ordinary and partial differential equations in mechanical engineering applications.

MECH3601

Thermofluid System Design

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH2612, MECH2712

Basic concepts of heat transfer, units, dimensions, exchange mechanism. Steady state conduction, multi dimensional conduction. Structure of boundary layers. Internal and external laminar and turbulent forced convection. Heat exchanger design. Radiative heat transfer. Dimensional analysis. Modelling of turbomachines and thermal systems. Experiments and heat transfer measurements.

MECH3602

Advanced Thermodynamics

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MECH2612, MECH2712

Utilisation of energy, availability - open and closed systems; generalised thermodynamic relations; kinetic theory of gases; non-reactive ideal gas mixtures. Combustion, chemical equilibrium, chemical kinetics and emission control. Compressible flow.

MECH4001

Communications for Professional Engineers

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Corequisite: MECH4003 or BIOM5001

Development of skills in the use of various media of communication. Communication within the organisational and social context of engineering. Presenting oral and written reports. Conference organisation and participation. Group projects in communications. Report on industrial training

Note: Corequisites may be adjusted for some mid-course entry plans.

MECH4003

Thesis A

School of Mechanical and Manufacturing Engineering
UOC6

Prerequisite: MECH3000 Excluded: MECH4000

To be taken in the second last session required for the completion of all requirements for the award of the degree. This course, together with MECH4004 Thesis B, which is to be taken in the following session, requires each student to demonstrate managerial, technical and professional skills in planning and executing an approved engineering project within a stipulated time limit. Each student is also required to report on their project work at a thesis conference which is organised under MECH4001 Communications for Professional Engineers. Each student is guided by

a supervisor, but successfully planning, executing and reporting on the project is the sole responsibility of each student. Thesis A does not require the submission of a thesis document. A satisfactory grade in this course is provisional pending successful completion of MECH4004.

MECH4004

Thesis B

School of Mechanical and Manufacturing Engineering
UOC9

Prerequisite: MECH4003 Corequisite: MECH4001 Excluded: MECH4000

To be taken in the last session required for the completion of all requirements for the award of the degree, i.e. in the session immediately following that in which MECH4003 Thesis A is taken. This course, together with MECH4003 Thesis A, requires each student to demonstrate managerial, technical and professional skills in planning, executing and reporting on an approved engineering project within a stipulated time limit. Each student is also required to report on their project work at a thesis conference which is organised under MECH4001 Communications for Professional Engineers. The project, on which each student works, will be a direct continuation of the project on which that student worked in MECH4003 Thesis A. Each student is guided by a supervisor, but successfully completing the project, writing the thesis and submitting two bound copies by specified deadlines are the sole responsibility of each student.

MECH8312

Fundamentals of Noise and Vibration Measurement

School of Mechanical and Manufacturing Engineering
UOC6

Excluded: MECH9312

Fourier coefficients of periodic signals. Power spectral density. Time windows and spectral analysis. Simple sound pressure measurements. Measurement of special descriptors of sound. Measurement of reverberation time and calculation of absorption coefficients. Measurements of the sound power level of a sound source by the direct and the comparison method. Measurements of the sound power levels of a sound source by the intensity method. Tape recording of noise and vibration signals. Using accelerometers.

MECH9142

Land Transport Vehicle Engineering

School of Mechanical and Manufacturing Engineering
UOC6 HPW3

This course outlines the context of the task for land transport vehicles, develops its technical mechanical engineering aspects and enables students to explore in depth an area of their choice (decided in consultation with the lecturer in charge). Topics covered include: The land transport task; local/global. Modes of land transportation; guided/non-guided, passenger/freight, private/public, practical/fun. Analysis of land transport systems covering; infrastructure, types of vehicles, power systems, structure, vehicle dynamics, manufacture, reliability, economics, safety, sustainability. Recreational land vehicles.

MECH9310

Advanced Vibration Analysis

School of Mechanical and Manufacturing Engineering
UOC6 HPW3

Excluded: MECH4310, MECH8310

Introduction to experimental vibration analysis using Fast Fourier Transform (FFT) techniques. Typical sources of vibration in machines. Analysis of continuous systems via classical and finite element techniques. Experimental modal analysis. Torsional vibrations, including geared shaft systems.

MECH9325

Fundamentals of Noise

School of Mechanical and Manufacturing Engineering
UOC6 HPW3

Excluded: MECH4321, MECH8325

Development of the acoustic plane wave equation, introduction of concepts of acoustic impedance, characteristic impedance, acoustic energy density, acoustic intensity and acoustic power. Measurement of sound pressure. Decibel scales. Standing waves. The effect of noise on people. Wave propagation in porous media. Transmission phenomena including transmission of plane waves between different media, through walls and along pipes. The analysis of expansion chamber mufflers and pipe side-branches. Basic energy approach to room acoustics.

MECH9361**Lubrication Theory and Design**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4361

Types of hydrodynamic bearings and bearing operation; properties of lubricants; theory of steady state hydrodynamic lubrication; hydrostatic and squeeze film lubrication applied to slider and journal bearings; bearing design with side leakage; thermal balance. Journal bearing dynamics; instability analysis. Elastohydrodynamic lubrication. Bearing materials; friction and wear. Grease lubrication.

MECH9400**Mechanics of Fracture and Fatigue**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4400

Theories of fracture; failure modes. Ductile, brittle fracture. Mechanics of crack propagation, arrest. Measurement of static fracture properties. Fatigue crack initiation, propagation. Engineering aspects of fatigue.

MECH9410**Finite Element Applications**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: AERO4401, AERO9415, MECH4410, NAVL4401

Introduction to finite element and associated graphics packages. Principles of mesh design and validation. Specification of boundary conditions including use of symmetry. Estimation of the cost of solution. Interpretation of results. Assessment of the accuracy of the results. Convergence to the exact solution. Selection of applications from linear and non-linear elasticity: three dimensional solids, plates and shells, plasticity, buckling and post-buckling behaviour, thermal stresses, dynamics including natural and forced vibration.

MECH9620**Computational Fluid Dynamics**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Prerequisite: MECH2612, MECH2712

Incompressible flow: primitive equations, stream function, vorticity equations. The conservative property. Stability analysis. Explicit, implicit methods. Upwind differences. SOR methods. Fourier series methods. Pressure, temperature solutions. Solving the primitive equations.

MECH9720**Solar Thermal Energy Design**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Prerequisite: MECH2612, MECH2712

Characteristics of solar radiation and solar collectors. Collector efficiency evaluation and prediction of long term performance. System modelling, energy storage; computer simulation and modelling of performance and economic worth.

MECH9730**Two Phase Flow and Heat Transfer**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4730

Nature of multiphase flow. Flow regime maps. Two-phase flow in vertical, horizontal and inclined pipes. Modelling of two-phase flow: homogenous model; drift flux model; drift velocity model; separated model. Annular and stratified flows. Flow in adiabatic pipes. Flow in heated pipes. The critical flow of a two-phase mixture. Pressure drop and heat transfer correlations in pipes. Subcooled, nucleate, pool and film boiling. Critical heat fluxes in boiling. Mechanisms of heat transfer in boiling. Nucleation, bubble dynamics and bubble parameters. Film and dropwise condensation on flat plates. Condensation on horizontal tubes and tube banks. Condensation inside tubes. Two-phase heat exchangers. Laboratory experiments.

MECH9740**Power Plant Engineering**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4740

Energy sources, power plant thermodynamics. Fuel, combustion processes and equipment. Boilers, turbines and condensers. Heat exchangers, pumps, water supply and treatment systems. Air circulating and heating systems. Station operation and performance. Economics of electrical power production. Environmental impacts of power plants. Alternate sources of energy. Power station field trip.

MECH9751**Refrigeration and Air Conditioning 1**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4751, MECH8751

Review of thermodynamic principles; evaluation of thermodynamic properties of real fluids. Refrigerants, their properties and applications. Gas cycle refrigeration. Steam-jet refrigeration. Vapour compression refrigeration; analysis and performance characteristics of the complete cycle; analysis and performance of multipressure systems. Analysis of the performance of compressors, condensers, evaporators and expansion devices. Thermo-electric refrigeration.

MECH9758**Air Conditioning Design**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Prerequisite: MECH2612, MECH2712

Pipe and duct design, air conditioning systems, plant room design, cooling towers and evaporative condensers, heat and mass transfer equipment, load calculations, building thermal simulation, life cycle cost minimisation.

MECH9761**Internal Combustion Engines 1**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4700

Thermodynamic cycles. Combustion, reaction kinetics. Real engine cycles. Chart, computer analysis. Spark ignition engines. Flame physics. Combustion chamber design. Charging, discharging; heat transfer; friction. Emissions, fuels, computer modelling; efficiency, performance, emissions. Testing. Laboratory.

MECH9920**Special Topic in Mechanical Engineering**

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

The syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

MEDM8001**Principles of Medicine for Optometry Students**

Faculty of Medicine

UOC3 HPW3

An overview of historical, epidemiological, pathophysiological, diagnostic, therapeutic and public health aspects of disease in man and the various clinical categories of practice. Specific topics in eye health are also covered with emphasis on diagnosis and appropriate referral.

Note: Students normally take the course in Year 4 of course 3950. Restricted to program 3950.

MEFT1100**Introduction to Media: Television, Telephones and Everyday Life**

School of Media, Film and Theatre

UOC6 HPW3

Introduces students to the breadth of contemporary media studies from television and the tradition of mass media studies to telephony and the study of networked media and communication technologies. Explains how media and communication technologies have transformed the rhythms of everyday life and the organisation of domestic space.

MEFT1200**Introduction to Film**

School of Media, Film and Theatre

UOC6 HPW4.5

Excluded: FILM1101, THFI1000, THFI1001

An introduction to the study and analysis of film and its reception.

MEFT1201**Working with Image and Sound**

School of Media, Film and Theatre

UOC6 HPW3

Excluded: FILM1105

Explores the creative and communicative possibilities of film, video and other audio-visual technologies. Presents a wide range of examples, from classics of experimental film to the latest music videos and television advertisements: preparing outlines and storyboards, capturing and generating images and sounds, experimenting with existing images and sounds - the editing process. Explores the creative potential of audio-visual media and deals with the practical problems.

MEFT1300**Reading Performance**

School of Media, Film and Theatre

UOC6 HPW3

Excluded: THFI1000, THFI1001, THFI1002

Introduces different ways of analysing performance and performance bodies. Focuses on cultural performance, hybridity, authenticity, carnival, liminality, ritual, possession-trance, fieldwork and ethnography, cultural display, tourist performance, everyday life, performance art and avant-garde genres.

MEFT1301**Introduction to Theatre and Performance Studies**

School of Media, Film and Theatre

UOC6 HPW3

Excluded: THFI1000, THFI1001, THST1101

Introduces the basic principles of and analytic vocabulary for the study of theatrical performance.

MEFT2100**Global Media: Markets, Flows and Cultures**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: MDCM2102

Explores the balance between globalisation and localisation in different media systems. Identifies key global players. Surveys current and emerging trends, technologies and regulatory regimes. Studies local uses and adaptations of global media and their implications for the nation state.

MEFT2102**Media Technologies and Cultural Change**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit

Examines key contemporary themes and figures in conceptualising society/technology relations; the specific nature of media technologies in relation to cultural change; the history of ideas surrounding media technologies; the diversity of social and cultural practices engaged with media technologies; the convergence of cultural technologies; new media means of artistic expression and as new modes of cultural manufacture.

MEFT2200**Contemporary Approaches to the Cinema**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 36 units of credit

Analyses and tests a number of contemporary theoretical approaches to the cinema.

Note: Excluded FILM2001.**MEFT2201****Australian Cinema and Television**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 36 units of credit; Excluded: AUST2028

Traces the emergence and significance of Australian screen cultures. Studies the development of the Australian film industry, including analysis of the economic, social and political factors and the myths which have shaped the industry. Studies the role of television in shaping the experience of modern Australia and its place in the world. Looks at a number of non-mainstream forms of audio-visual production in Australia.

Note: Excluded FILM2002.**MEFT2202****Movie World: National Cinemas**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 36 units of credit

Examines both the experience of the global cinema industry in particular places, and also the power of the cinema to articulate compelling visions of collectivity in different places at particular times and considers the following questions: What is the relationship between 'world cinema' and 'national cinemas'? Is it an economic question, a cultural question, or both? Is 'world cinema' anything more than all those films that are not made in Hollywood? What is 'national' about national cinemas? How are films supposed to speak for, as well as to, a mass of strangers who happen to share national citizenship?

Note: Excluded FILM2007.**MEFT2203****The Hollywood System**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 36 units of credit; Excluded: FILM2005, FILM2006

Traces the history of Hollywood as an industry, a cultural institution and a global supplier of stories, images and myths from its beginnings through the studio system to today's adaptations to globalisation and new technologies. Introduces different approaches to the study of film history, and includes screenings and analysis of key films.

Note: Excluded FILM2021.**MEFT2300****Staging Australia**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: DANC1002 or DANC1103 or FILM1101 or PFST1002 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences; Excluded: AUST2027, THST2163

Broadly-based study of the rise of Australian theatre since the 1960s, with the focus on recent performance. The emphasis is on wide theatrical movements, including the larrikin theatre of the 1970s, alternative/community theatre; Aboriginal theatre; women's and multicultural performance; and current trends in playwriting and contemporary performance.

MEFT2306**Theories of Acting and Performing**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: THST2143, THST2147

Studies theories and practices of acting and performing in text and non-text based theatre. Combines traditional academic and workshop teaching. Topic areas include: acting as cultural and political expression; relationships between actor/character/persona/spectator; approaches to text and training; analysis of the performing body; performance and performativity; intersections with modernism and postmodernism.

MEFT2351**Live Entertainment & Popular Culture**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: PFST2009, THFI2010

Tracks the influence of popular performance genres on contemporary culture, looking at vaudeville, burlesque, radio and 1950s television. Develops theories of popular culture including the discourse of value and applies these to a variety of case studies in contemporary culture and media.

MEFT3102**Electronic and Digital Aesthetics**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: MDCM3102

Investigates the role of the senses in the way that people engage with electronic and digital media in a variety of contexts, including electronic and digital art, everyday and domestic media technologies, and popular cultural uses such as electronic music, computer games and digital image technologies. Considers how the traditional relation of aesthetics to culture might be changing as the result of electronic and digital media technologies.

MEFT3104**Transnational Media in the Asia Pacific**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit

Explores debates concerning transnationalism, regionalisation and globalisation in the context of Asia Pacific media systems. Considers examples of how nations within the Asia Pacific use media to resist cultural homogenization and provides local resistance to the forces of globalisation. Taking as a point of reference the rise of Asian modernities and especially China's recent market liberalisation, examines the increasing regional integration of the Asia Pacific through the flows of the media and popular cultural products.

MEFT3200**Video Exercise**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 FILM courses

Introduces the basic concepts that underlie a video production, from script to final cut, plus some practical experience of video-making.

Note: Excluded FILM3001.**MEFT3201****Aspects of Film History**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2000

Introduces case studies in film history and brings into focus different perspectives, traditions, and methodologies in the historiography of cinema. Involves analysis of key texts, and viewing of a wide range of relevant films. Possible topics include cinema and popular memory; the cinema, modernism and modernity; changing performance styles in American cinema; cinema and the city.

Note: Excluded FILM3002.**MEFT3202****Explorations in Contemporary Film Theory**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2013

Engages with specific debates in contemporary film theory at an advanced level. Involves critical analysis of key texts, and the viewing of a wide range of relevant films. Possible topics include theories of film spectatorship; psychoanalysis and the study of cinema; feminist film theory; time, history and realism; film sound.

Note: Excluded FILM3003.**MEFT3203****Film Genres and Styles**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2008

Examines the development, production and exploitation of various styles of film-making and film genres. Involves critical analysis of key texts, and viewing a wide range of relevant films. Possible topics include film comedy; the musical: song and dance on film; fantasy and the cinema; film noir in social and historical context.

Note: Excluded FILM3004.**MEFT3204****Special Program in Film Studies**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 12 units of credit in Level 2 FILM courses

Suitably qualified students wishing either to take more than one topic offered under the rubric of a Level 3 course in the Film Studies program or to work in an area not covered by an existing course may apply to the School to take this option. Approval of an independent study program will depend on its suitability, and the availability of a staff member to undertake supervision.

Note: Permission for enrolment in the special program must be obtained from the Head of School. Only one Special Program in Film can be credited to a degree program. Excluded: FILM3005.

MEFT3205**Cinemas and Cultures**

School of Media, Film and Theatre

UOC6 HPW4

Prerequisite: 12 units of credit in Level 2 FILM courses

Introduces case studies in regional, local, and national cinemas. Critical analysis of key texts and a wide range of relevant films. Topics may include French cinema: issues of aesthetics and representation; Japanese cinema; cinemas of Asia and the Pacific Rim.

Note: Excluded FILM3006.**MEFT3300****Aspects of Theatre and Performance History**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: THFI3900

Introduces students to ways of investigating and interpreting the theatrical and performance past. Analyses performance evidence and representations as well as history texts and historiographical theories. Topics include: documentary evidence and iconography, periodisation, historiography and historicisation, biography and autobiography, social history and the performing body, and performance history and methodology from fields such as gender and postcolonial studies.

MEFT3302**Production Exercise**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: THST2135

Practical work on a theatrical presentation within the School aimed at providing direct experience of the production process and its evaluation.

Note: Before enrolling in this course students must study the detailed course outline available from the Io Myers Studio and complete a Production Selection Form. Students should note that rehearsals will commence four weeks before the beginning of Session, and they must be available in the evenings for technical rehearsals in Week 1 of Session and for the performances in Week 2.

MEFT3303**Workshop Exercise**

School of Media, Film and Theatre

UOC6 HPW5

Prerequisite: 72 units of credit; Excluded: THST2137

Practical work on a small-scale theatrical presentation within the School. This is timetabled on a weekly basis with more intensive rehearsal close to presentation.

MEFT3351**Live Art and Physical Theatres**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: PFST2015, THFI2011, THST2161

Examines the function and significance of the body in non-text based forms of performance from twentieth century experimental performance to contemporary dance theatre and physical theatre. Studies the various ways in which physical performance practices are constructed and interpreted across disciplines such as visual arts, dance, circus and time-based arts. Examines the kinds of effects produced in, on, and through bodies in theatre and visual culture in different cultural and historical contexts.

MEFT3352**Studies in World Theatre**

School of Media, Film and Theatre

UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: PFST2201, THST2161

A comparative study of world theatre genres looking at vernacular, traditional, ritual, national and ethnic performance traditions of Asia, Africa, the Americas, and Europe.

MEFT3353**Performance in a Mediatized Culture**

School of Media, Film and Theatre
UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: PFST2016

Examines the place of technology in contemporary performance culture from MTV to performance art. Considers the rise of video literacy and the expanding field of digital culture in terms of the ways in which such technologies have shifted the parameters of performance and representation. Looks at questions such as the convergence of performance genres and the remediation of art works and theoretical concepts such as posthumanism and cybernetics. Critiques the notion that live performance forms are discrete and unmediated and therefore cut off from contemporary cultural change.

MEFT3354**Performance Making**

School of Media, Film and Theatre
UOC6 HPW3

Prerequisite: 72 units of credit; Excluded: PFST2149

Explores performer/artist-generated and community-orientated work, covering the making of performance works that neither derive from a traditional dramatist script, nor have the creation of a play as their end product. Combines a practical project with critical and theoretical inquiry.

MEFT4000**Media, Film and Theatre Honours (Research) Full-Time**

School of Media, Film and Theatre
UOC24 HPW5

Prerequisite: 54 units of credit in FILM/PFST/THFI/THST courses at 70% including THFI3902, THFI3903 and either THFI3900 or THFI3901 and permission of Head of School

Students are required (a) to undertake either an original piece of research extending throughout the year and submit a thesis based upon it or a practical project and report, and (b) to complete two seminars, one of which is compulsory, the other chosen from two alternatives (see School Honours Handbook for further details). The choice of seminars enables students to pursue a specialisation in theatre, or in film, or in theatre/film. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

MEFT4050**Media, Film and Theatre Honours (Research) Part-Time**

School of Media, Film and Theatre
UOC12 HPW3

Prerequisite: 54 units of credit in FILM/PFST/THFI/THST courses at 70% including THFI3902, THFI3903 and either THFI3900 or THFI3901 and permission of Head of School

Students are required (a) to undertake either an original piece of research extending throughout the year and submit a thesis based upon it or a practical project and report, and (b) to complete two seminars, one of which is compulsory, the other chosen from two alternatives (see School Honours Handbook for further details). The choice of seminars enables students to pursue a specialisation in theatre, or in film, or in theatre/film. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

MFAC1501**Foundations**

Faculty of Medicine
UOC12 HPW15

The overall aim of the Foundations course is to introduce students to the independent and collaborative learning approach that characterises the new Medicine program. Foundations is an integrated eight-week experience for new students, which requires them to work independently and in teams to explore their understanding of the fundamentals of cell biology, the structure of the human body, and a range of professional issues pertinent to medical practice. It consists of two separate but interlinked health scenarios, the first on immunisation for medical students, and the second on stomach pain. The teaching and learning methods are designed to incorporate issues such as information management, and written and oral communication. The Foundations course also provides an orientation for new students into the academic support and mentoring programs. Assessment will be by evidence of satisfactory participation in each of the various activities undertaken.

MFAC1502**Society & Health 1**

Faculty of Medicine
UOC12 HPW15

Co-requisite: MFAC1501

The two courses, Society and Health 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the inter-relationships between the health of individuals or populations and the environment in which they live. The major themes include the societal determinants of health, the diversity of society focusing both on culture and genetics, systems that provide health care and the relationship between health and human rights. These themes will be studied taking global, community and individual perspectives on health.

Infectious diseases will be used as an example of how the environment influences the health of individuals and populations. Areas to be explored will include relevant aspects of genetics, microbiology, cell biology, immunology and inflammation. In one year there will also be a focus on the haematopoietic and lymphoid tissues, as well as skin and structural elements of human tissues, while in the alternate year the focus will be on the respiratory system. Each course will consider the health status of populations, as well as aspects of normal human behaviour.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1503**Beginnings, Growth & Development 1**

Faculty of Medicine
UOC12 HPW15

Prerequisite: MFAC1501

The two courses, Beginnings, Growth and Development 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives - To gain an understanding of events in the first stages of the human life cycle, through study of conception, pregnancy and birth; childhood growth and development; puberty and adolescence. These themes will be explored by further studies of relevant aspects of cell biology focusing on growth, differentiation, and developmental biology, as well as the biology of reproduction. In the alternate year, there will be an emphasis on upper GIT and aerodigestive tract structure and function, and common childhood illness, as well as the endocrine system, sexuality, and common psychiatric conditions. Clinical skills will focus on antenatal care, as well as the examination of children, assessment of nutritional status and the psychological state.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1504**Health Maintenance 1**

Faculty of Medicine
UOC12 HPW15

The two courses, Health Maintenance 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter during both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the internal and external mechanisms that maintain a state of health, primarily in adults. The key themes to be studied are homeostasis, sustenance and equilibrium; education, health promotion and disease prevention; host defence; and lifestyle factors that risk health.

In one of the two years, these themes will be explored by a detailed study of the cardiovascular system, including its key role in maintaining internal bodily health, mechanisms leading to cardiovascular disease including relevant lifestyle factors, and basic pharmacological principles, using drugs acting on the cardiovascular system as an example. Additional topic areas will include mechanisms that maintain body temperature, fundamentals of host defence, and physical and psychological responses to stress. Learning of clinical skills will focus on examination of the cardiovascular system and on health promotion. In the other year, the themes will be illustrated by study of digestion, metabolism and excretion, including problems of overnutrition and diabetes. Other topic areas are hepatobiliary structure and function, and its disorders, the renal system, the pharmacology of drug metabolism, and the consequences of failure of these vital organs. Clinical skills will focus on examination of the gastrointestinal and urinary systems.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1505

Ageing and Endings 1

Faculty of Medicine
UOC12 HPW15

The two courses, Ageing and Endings 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the particular health issues that arise in elders, building upon learning done in previous courses. The themes are menopause; the ageing process; degenerative diseases; and death, dying and palliative care.

In one of the two years, breast cancer and neurological disease will be used to explore these themes. Students will study the structure and function of the brain and central nervous system, and the pathology of stroke, dementia and neoplasia. Relevant aspects of public health, including clinical epidemiology and community resources will be explored, whilst learning of clinical skills will involve examination of the central nervous system and breast examination. In the other year, the focus will shift to the peripheral nervous system and musculoskeletal system, including the cellular and molecular aspects of nerve transmission, membrane physiology and relevant pharmacology. The biological, psychological and behavioural aspects of pain will be used as an integrating concept to link many of these topics. Clinical skills will focus on examination of the musculoskeletal and peripheral nervous system. A second major topic area will be further study of neoplasia, focusing on colorectal cancer.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1506

Society and Health 2

Faculty of Medicine
UOC10 HPW15

The two courses, Society and Health 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the inter-relationships between the health of individuals or populations and the environment in which they live. The major themes include the societal determinants of health, the diversity of society focusing both on culture and genetics, systems that provide health care and the relationship between health and human rights. These themes will be studied taking global, community and individual perspectives on health.

Infectious diseases will be used as an example of how the environment influences the health of individuals and populations. Areas to be explored will include relevant aspects of genetics, microbiology, cell

biology, immunology and inflammation. In one year there will also be a focus on the haematopoietic and lymphoid tissues, as well as skin and structural elements of human tissues, while in the alternate year the focus will be on the respiratory system. Each course will consider the health status of populations, as well as aspects of normal human behaviour. A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1507

Beginnings, Growth and Development 2

Faculty of Medicine
UOC10 HPW15

The two courses, Beginnings, Growth and Development 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of events in the first stages of the human life cycle, through study of conception, pregnancy and birth; childhood growth and development; puberty and adolescence. These themes will be explored by further studies of relevant aspects of cell biology focusing on growth, differentiation, and developmental biology, as well as the biology of reproduction. In the alternate year, there will be an emphasis on upper GIT and aerodigestive tract structure and function, and common childhood illness, as well as the endocrine system, sexuality and common psychiatric conditions. Clinical skills will focus on antenatal care as well as the examination of children, assessment of nutritional status and the psychological state.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1508

Health Maintenance 2

Faculty of Medicine
UOC10 HPW15

The two courses, Health Maintenance 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter during both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the internal and external mechanisms that maintain a state of health, primarily in adults. The key themes to be studied are homeostasis, sustenance and equilibrium; education, health promotion and disease prevention; host defence; and lifestyle factors that risk health.

In one of the two years, these themes will be explored by a detailed study of the cardiovascular system, including its key role in maintaining internal bodily health, mechanisms leading to cardiovascular disease including relevant lifestyle factors, and basic pharmacological principles, using drugs acting on the cardiovascular system as an example. Additional topic areas will include mechanisms that maintain body temperature, fundamentals of host defence, and physical and psychological responses to stress. Learning of clinical skills will focus on examination of the cardiovascular system and on health promotion. In the other year, the themes will be illustrated by study of digestion, metabolism and excretion including problems of overnutrition and diabetes. Other topic areas are hepatobiliary structure and function and its disorders, the renal system, the pharmacology of drug metabolism, and the consequences of failure of these vital organs. Clinical skills will focus on examination of the gastrointestinal and urinary systems.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1509**Ageing and Endings 2**

Faculty of Medicine
UOC10 HPW15

The two courses, Ageing and Endings 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the particular health issues that arise in elders, building upon learning done in previous courses. The themes are menopause; the ageing process; degenerative diseases; and death, dying and palliative care.

In one of the two years, breast cancer and neurological disease will be used to explore these themes. Students will study the structure and function of the brain and central nervous system, and the pathology of stroke, dementia and neoplasia. Relevant aspects of public health, including clinical epidemiology and community resources will be explored, whilst learning of clinical skills will involve examination of the central nervous system and breast examination. In the other year, the focus will shift to the peripheral nervous system and musculoskeletal system, including the cellular and molecular aspects of nerve transmission, membrane physiology and relevant pharmacology. The biological, psychological and behavioural aspects of pain will be used as an integrating concept to link many of these topics. Clinical skills will focus on examination of the musculoskeletal and peripheral nervous system. A second major topic area will be further study of neoplasia, focusing on colorectal cancer.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1510**Ageing and Endings 2 plus extension**

Faculty of Medicine
UOC12 HPW15

In addition to the standard course content for Ageing and Endings 2, students will receive training in library and information skills relevant to the Arts & Social Sciences, to facilitate completion of their concurrent/consecutive BA program.

Assessment of the extension work will be by evidence of satisfactory participation in each of the various activities.

MFAC2501**Society and Health 3**

Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical and practical experiences in the community in both urban and rural areas as the basis for learning, students will build upon their understanding (developed in phase 1) of the relationship between the health of an individual or population and the social and physical environment. In addition, students will develop understandings of the population health aspects of relevant illnesses and the role of other health professionals and community based services in prevention of illness and addressing the social and environmental determinants of health. Students will also extend their capabilities in communication with, and assessment of, individual patients and population groups with specific health issues. A case-based teaching methodology is employed to link acquisition of clinical and public health capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in community based clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. Typical environments and/or experiences will include sexual health and infectious disease services, services for particular population groups such as indigenous people, refugees, homeless people, community specialist services such as drug and alcohol, diabetes infectious disease, respiratory, or public health services that focus on health care based in the community and preventative approaches. There is a 2 week experience based in a rural community and general practice in the 6th and 7th weeks of the course. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources covering aspects of public health, community medicine, pathology, infectious disease and pharmacology. Assessment

will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; social and behavioural determinants of health, ethics; or population health issues. In addition, the student's performance during the module will be graded as satisfactory/unsatisfactory based on attendance, participation and review of cases and problems managed.

MFAC2502**Beginnings, Growth and Development 3**

Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding (developed in phase 1) of the biomedical, behavioural and social science principles involved in the human life cycle stages spanning conception to adulthood. In addition, students will develop understandings of the clinical aspects of illnesses relevant to this stage, whilst extending their capabilities in communication with, and physical examination of, patients with specified health issues. A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. The issues covered include gynaecology and sexual health issues in women of reproductive age, normal pregnancy and delivery, pregnancy complications, the healthy neonate and normal infant development, acute illness and injury in young children, chronic conditions in childhood and adolescent health.. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources. Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/unsatisfactory.

MFAC2503**Health Maintenance 3**

Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding (developed in phase 1) of the internal and external mechanisms that maintain health or lead to disease. In addition, students will develop understandings of the clinical aspects of relevant illnesses, whilst extending their capabilities in communication with, and physical examination of, patients with specified health issues.

A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. These will typically include acute disturbances of health leading to hospitalisation including critically ill patients and conditions requiring surgical treatment, patients with acute and chronic conditions cared for in ambulatory settings, as well as learning in some community-based practices. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources.

Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/unsatisfactory.

MFAC2504**Ageing and Endings 3**

Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding of the specific health issues faced by elders that they established in phase 1. In addition, students will develop understandings of the clinical aspects of illnesses occurring in elders, whilst extending their capabilities in

communication with, and physical examination of, patients with specified health issues.

A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. Typical clinical issues encountered will include complex co-morbidity problems in elders, chronic illness and disability, degenerative diseases including arthritis and dementia, rehabilitation, palliative care and cancer medicine, stroke, vascular disease, and terminal illness. These experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources.

Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/unsatisfactory.

MFAC4501

Independent Learning Project 1

Faculty of Medicine

UOC8 HPW12

The three courses [MFAC 4501, MFAC 4502, MFAC 4503] collectively comprise the Independent Learning Project and must be taken consecutively. After completing Phase 1, all students (unless exempt) will be required to undertake an Independent Learning Project (ILP) equivalent to 3 x 8-week blocks. During the course of the ILP period the students will also complete 12 units of credit (UoC) in courses offered by Faculties other than the Faculty of Medicine (the Flexible course). In order to complete both of these requirements, the 24 week ILP enrolment will be staggered, as 16 weeks full-time and 16 weeks part-time, over 32 weeks.

Objectives: To enhance students' abilities for independent learning, critical analysis and research. During the course of their ILP the students will be expected to achieve the following specific goals:

- (1) An ability and inclination to question the basis of current scientific thinking in relation to medical and public health practice.
- (2) To retrieve literature on a topic and demonstrate a familiarity with the use of medical databases.
- (3) To evaluate current knowledge in a field and to provide a critical appraisal of that body of knowledge.
- (4) To identify a problem in their chosen field and to understand and participate in the process of designing a scientific investigation of the problem.
- (5) To be aware of the ethical issues involved in medical research and be able to write an ethics proposal for their proposed study.
- (6) To critically evaluate data including the appropriate use and interpretation of statistics.
- (7) To communicate findings and interpretations in their chosen field, both orally and in writing with experts, peers, the media and general public.
- (8) To appreciate the implications of research findings in health decision making and medical practice.

The ILP will offer scope for in-depth study in a variety of possible settings and fields of study. Some examples include laboratory-based work in the biomedical sciences, audits of clinical practice, projects dealing with cross-cultural issues, as well as projects dealing with medical law or ethics and health economics. Projects may be undertaken outside the Faculty, or subject to approval, in another institution.

Although there is considerable flexibility in the choice of topic, all projects must involve;

- (1) identification of an issue and related questions relevant to the field or environment where learning will occur;
- (2) a review and critical analysis of literature or practice relevant to the issue;
- (3) articulation of an approach to address the issue, including consideration of ethical issues;
- (4) a period of research or scholarship in which the issue is explored or investigated; and
- (5) evaluation, communication and presentation of the results of in-depth study.

Assessment will include the components of progressive assessment (on completion of each of the first two 8-week modules i.e. MFAC 4501 and 4502) and a report submitted at the conclusion of the project (i.e. on completion of MFAC 4503).

MFAC4502

Independent Learning Project 2

Faculty of Medicine

UOC8 HPW12

The three courses [MFAC 4501, MFAC 4502, MFAC 4503] collectively comprise the Independent Learning Project and must be taken consecutively. After completing Phase 1, all students (unless exempt) will be required to undertake an Independent Learning Project (ILP) equivalent to 3 x 8-week blocks. During the course of the ILP period the students will also complete 12 units of credit (UoC) in courses offered by Faculties other than the Faculty of Medicine (the Flexible course). In order to complete both of these requirements, the 24 week ILP enrolment will be staggered, as 16 weeks full-time and 16 weeks part-time, over 32 weeks.

Objectives: To enhance students' abilities for independent learning, critical analysis and research. During the course of their ILP the students will be expected to achieve the following specific goals:

- (1) An ability and inclination to question the basis of current scientific thinking in relation to medical and public health practice.
- (2) To retrieve literature on a topic and demonstrate a familiarity with the use of medical databases.
- (3) To evaluate current knowledge in a field and to provide a critical appraisal of that body of knowledge.
- (4) To identify a problem in their chosen field and to understand and participate in the process of designing a scientific investigation of the problem.
- (5) To be aware of the ethical issues involved in medical research and be able to write an ethics proposal for their proposed study.
- (6) To critically evaluate data including the appropriate use and interpretation of statistics.
- (7) To communicate findings and interpretations in their chosen field, both orally and in writing with experts, peers, the media and general public.
- (8) To appreciate the implications of research findings in health decision making and medical practice.

The ILP will offer scope for in-depth study in a variety of possible settings and fields of study. Some examples include laboratory-based work in the biomedical sciences, audits of clinical practice, projects dealing with cross-cultural issues, as well as projects dealing with medical law or ethics and health economics. Projects may be undertaken outside the Faculty, or subject to approval, in another institution.

Although there is considerable flexibility in the choice of topic, all projects must involve;

- (1) identification of an issue and related questions relevant to the field or environment where learning will occur;
- (2) a review and critical analysis of literature or practice relevant to the issue;
- (3) articulation of an approach to address the issue, including consideration of ethical issues;
- (4) a period of research or scholarship in which the issue is explored or investigated; and
- (5) evaluation, communication and presentation of the results of in-depth study.

Assessment will include the components of progressive assessment (on completion of each of the first two 8-week modules i.e. MFAC 4501 and 4502) and a report submitted at the conclusion of the project (i.e. on completion of MFAC 4503).

MFAC5001

Geriatrics/General Practice/Subspecialties

Sch Public Hlth and Comm Med

UOC10

Prerequisite: MDSG4001

This nine week term commences with an introductory week of tutorials in Geriatrics, Dermatology, Otorhinolaryngology and General Practice. The remainder of the term consists of four-week teaching blocks in urban general practice and specialty outpatient clinics, 2 weeks in geriatrics and 2 weeks in rural general practice. General Practice Aims:

By the end of the course the students should have acquired: 1. An understanding of the principles and approach in primary health care. 2. An understanding of the knowledge, attitudes and skills required by a competent general practitioner. 3. Skills in communicating with patients especially in history taking and patient education. 4. Skills in identifying and managing common problems and preventive care in general practice. 5. Knowledge of the principles of assessment and management in general practice. 6. An understanding of rural general practice and health issues in rural communities. Tutorials: During the teaching sessions on campus or clinical sites and during the attachments, students are introduced to: principles of primary care; assessment and management GP consultation; management of common problems and preventive care; rural practice and issues in rural health. Assessment: Students will identify 4 cases for presentation at the tutorial day, a written assignment on a rural health issue during their rural GP attachment, and a final viva assessment. Geriatrics

Objectives: 1. To gain an understanding of diagnosis and assessment in geriatric medicine; 2. To address the management of certain specific disorders in the elderly such as dementia, falls, incontinence, stroke, mobility disorders, dying and terminal care; 3. To gain information on appropriate drug therapy; 4. To gain insight into the roles of workers involved in caring for the elderly including physiotherapists, occupational therapists, speech therapists, community nurses and nurses in nursing homes; 5. To become familiar with the broad spectrum of geriatric services including the day hospital, the acute hospital, the rehabilitation centre, the nursing home, community nursing and hospital care; 6. To stimulate thought concerning future directions for an ageing Australia. Educational activities: The course consists of tutorials and practice experience in a range of health care facilities. Assessment: Students are assessed on a viva voce, written assessments and log book completion. Otorhinolaryngology

Objectives: 1. To learn the basic skills of the assessment of diseases and conditions affecting the ears, nose and throat. 2. To learn the management of the common diseases of the ear, nose and throat and the management of these conditions. Educational activities: Lectures at beginning of Year 5 and skills transfer tutorial in week 1. Students will also attend approximately 4-6 sessions in specialists rooms or clinics. Assessment: Students will be assessed through completion of a log attendance and final written objective structured clinical examination. Dermatology **Objectives:** 1. To learn the clinical symptoms and signs of the major conditions affecting the skin. 2. To learn the diagnosis of common skin diseases and conditions and their management. Educational activities: Tutorials in week 1. Students will attend approximately 4-6 sessions in dermatology clinics or a week attached to a dermatology registrar or dermatologist in their rooms. Assessment: Students will be assessed through completion of a log attendance and final written objective structured clinical examination.

MFAC6001

Final Year Elective Term

Faculty of Medicine
UOC4

Prerequisite: MFAC5001, OBST5001, PAED5101, PSCY5001

Objectives: These include one or more of the following: to further develop knowledge and skills in Medicine and/or Surgery; to acquire preliminary training for a career in a specialty of medicine; to experience a different pattern of health care delivery from that practised in Australia; to obtain experience which may influence subsequent career orientation; to reinforce an area of study already covered in the undergraduate program; to obtain a short introduction to research methods and philosophy.

The elective term may include work in one of the following areas: in any school or department within the Faculty of Medicine; in a hospital or medical institution either in Australia or in another country; with a medical practitioner either in Australia or in another country.

Students should make individual arrangements for electives and are advised that some overseas universities, governments, health authorities and/or hospitals require very early applications, accompanied by certification that the applicant is an enrolled medical student of the University who is eligible to undertake the specified term. When making the arrangements, students should specifically request that an appropriate person is willing to act as a supervisor. The supervisor is asked to submit a report to the Office of the Dean by the end of the term.

Assessment: Each student is required to produce a report which describes the nature of the work done during the Elective Term. This should be approximately 1000 words in length. The reports from the student and the supervisor must be submitted to the Office of the Dean no later than the last day of the Elective Term. The reports are forwarded to the relevant Clinical Associate Dean for a decision as to whether the student has completed a satisfactory Term, and thence to the Assessment Committee. It is the student's responsibility to ensure that both reports (including

the supervisor's report) are received by the due date and in time for consideration by the Assessment Committee.

MGMT1001

Fundamentals of Management

School of Organisation and Management
UOC6 HPW3

This course provides an introduction to the fundamental principles, practices, issues and debates associated with the management of public, business and third sector organisations. The frameworks, concepts and theories covered in the course are introduced to explain how managers deal with the diversity of issues faced in the effective management of contemporary organisations. The underpinning themes of the course centre on how managers can deal with the multiple demands of complex and turbulent environments, promote and sustain competitive advantage, manage changing social, political and technological factors inside and outside the organisation, ensure ethical and social responsibility, develop global organisations and manage diversity in the workforce. How management goes about its principal tasks of managing strategy, structures, people and systems are the key focus issues of the course. The main roles of modern management - planning, leading, innovating, organising and controlling - are also examined. Topics include the emergence, evolution and structure of management, conceptions of managerial work; management fads, fashion and knowledge; the task and internal environment; regulating people; the nature of organising; change and innovation; decision-making; influence processes; power and politics; ethical issues and professionalism in management; performance management: control and planning; and current trends.

MGMT1002

Managing Organisational Behaviour

School of Organisation and Management
UOC6 HPW3

Prerequisite: MGMT1001; Exclusion: IROB1712

This course provides a detailed analysis of macro and micro dimensions of organisational behaviour. It draws on the inter-disciplinary foundations of the theory and practice of organisational behaviour in the context of the management of public, private and third organisations. The course offers a critical introduction to the range of frameworks on organisational structures, processes and modes of organising. Central themes include power and resource dependence, the management of culture and meaning, the role of control, gender, social responsibility, organisational performance, and professional and ethical dimensions of management practice. Topics include; organisational design, management environments, organisational learning, managing individuals, motivation, leadership, group and teamwork; decision-making, conflict and negotiations, organisational change. Case studies and exercises are used to illustrate organisational and behavioural issues.

MGMT1101

Global Business Environment

School of Organisation and Management
UOC6 HPW3

Excluded; IBUS1107

This course examines key global environmental factors and issues impacting on the development of international business. Major topics include: globalisation of business; national differences in the political, social and legal environment, political and country risk; cultural differences and their impact on international business; ethical issues in international business; international trade issues; theory and politics of foreign direct investment; international competitiveness; the internationalisation of business activities and the development of multinational enterprises; foreign exchange markets; the international monetary system and development of the global capital market.

MGMT1102

Managing Across Cultures

School of Organisation and Management
UOC6 HPW3

The aim of this course is to develop a conceptual and practical understanding of how people differ across cultures, how these cultural differences impact on international business interactions, and how organisations can recognise and value cultural differences, aspects that are critical to the international business environment. Topics include the nature and dimensions of culture, managing cultural differences, the dynamics of intercultural communication, negotiating across cultures, working with multi-cultural teams, managing cross-border conflicts,

and global perspectives to leadership, motivation and decision making. Further topics include human resource development across cultures and issues unique to global management including cross cultural entry and re-entry transitions, problems relating to expatriation and repatriation, and the challenges of managing global careers. Central to this course is the integration of theory and practice, analyses of international business case studies, role plays, interactive and experiential learning activities, and the critical evaluation of relevant readings and journal articles.

MGMT1701

Industrial Relations

School of Organisation and Management
UOC6 HPW3

Provides a multi-disciplinary introduction to a range of important concepts and issues in Australian industrial relations. Topics include: political, social, economic, legal, historical and psychological aspects of the evolution and operation of modern industrial relations; the nature and implications of strikes, lockouts and other forms of industrial conflict and alienation; the structure and policies of State and Federal trade unions, the State labor councils and such peak organisations as the Australian Council of Trade Unions; the employer industrial relations function, management strategies and the structure and policies of employer associations; processes of work rule determination, such as collective bargaining, mediation, conciliation and compulsory arbitration; labour movements; and the role of the various arbitration tribunals and government instrumentalities with respect to industrial relations.

MGMT1702

Labour Organisation

School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701

Covers the formation and development of Australian unions; analysis of economic, legal, political and social framework within which unions operate; the role of unions; the structure and government of unions; union democracy and politics; union strategies; and unions and the balance of power. The course will discuss the policies and operation of unions generally, and of State labor councils and the Australian Council of Trade Unions.

MGMT1712

Management of Organisations

School of Organisation and Management
UOC6 HPW3

Provides an interdisciplinary approach to the field of organisational behaviour and management. It introduces students to a range of perspectives on organisational structures and processes, and considers how they help us understand various management theories and practices. On this basis, issues of power, control, conflict and culture are explored. Other topics include: changing approaches and attitudes to work; social and political influences on group behaviour; teamwork and other managerial interventions; leadership and motivation; gender, EEO and human resource management.

MGMT2001

Managing Innovation and Organisational Change

School of Organisation and Management
UOC6 HPW3
Prerequisite: MGMT1001, MGMT1002

This course examines the role of the innovation process in the management of organisations and change managing change. It explores the role of creativity in innovation and the nature and processes of organisational change. It focuses on technological, administrative and process innovation as well as contemporary techniques and procedures used to understand, initiate, plan and implement change. The course is shaped by contemporary concerns over the need to combine consistent structures for predictable and efficient operations and personnel employment, with flexibility and timely adaptability to respond to the environment. It adopts a critical perspective and uses a multi-disciplinary framework drawing on several disciplinary areas as they contribute to the theory and practice of innovation and change. Topics encompassed include: features of organisation design; types and phases of change; nonlinear dynamics; managerial and organisational cognition; interpretative systems and sense-making; culture and intervention for change; organisation development; techniques for process change, (eg. TQM, business processes); the role of entrepreneurship, creativity, leadership and managerialism; and change agency. Case studies and exercises are used to explore central issues.

MGMT2002

Managing Business Communication

School of Organisation and Management
UOC6 HPW3
Prerequisite: MGMT1001

Effective communication management, at both individual and organisational levels, is essential in business and professional contexts. This course facilitates understanding of how people manage their communication processes, considers 'best practice' for successful organisational communication, and provides opportunities for communication skills development and enhancement. Topics include the theories and principles of communication management; the dynamics of interpersonal communication; the significance of intercultural and international business communication; the use of language and non-verbal communication; managing communication in small groups and teams; communication in negotiations; creating communication networks; managing ethical issues in business communication; conducting communication audits and developing benchmarks; and strategies for improving organisational communication. The course also includes practical components for improving individual and small group communication.

MGMT2101

International Business and Multinational Operations

School of Organisation and Management
UOC6 HPW3
Prerequisite or corequisite: IBUS1101 or IBUS1107 Excluded: IBUS2107

The focus of this course is on the multinational enterprise and the management of cross-border operations. Major topics include: multinational enterprises and the internationalisation process; motives for foreign investment; strategy of international business; organisation of international business; foreign market selection and entry strategy; exporting, importing and countertrade; the management of international business operations including an introduction to international human resource management, learning and knowledge management, manufacturing and materials management, marketing management, and accounting and financial management.

MGMT2105

Chinese Business Enterprise

School of Organisation and Management
UOC6 HPW3
Prerequisite: 48UOC in Arts or Law or Commerce & Economics; Exclusion: CHIN2501

An introduction to business and management in the People's Republic of China. The nature of Chinese business enterprise and the macroeconomic, legal, cultural and operational environment. Chinese business and management practices including 'guangxi' and business negotiations. Enterprise reform, enterprise finance and stock markets, accounting and taxation, foreign trade and internationalisation, and the management of foreign investment enterprises. Australian-Chinese business relations including trade and investment links.

MGMT2106

Comparative Management Systems in East Asia

School of Organisation and Management
UOC6 HPW3
Prerequisite: IBUS1101 or MGMT1101

An introduction to the comparative management systems in Northeast Asia including Japan, Korea, and China. Topics include: recent business performance in East Asia; comparative analysis of business systems, including Japanese Keiretsu, Korean Chaebol and Chinese family business; State enterprises and government-business relations in China; comparative analysis of organisational structures, corporate strategy and human resource management practices; impact of culture on management style and decision making; sub-contracting and buyer-supplier networks; and the globalisation of business.

MGMT2702

Industrial Law

School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Looks at the nature and purposes of the legal system and industrial law; the law concerning the contract of employment; trade unions; industrial

law; powers of Government; and the Commonwealth Conciliation and Arbitration System, awards, penal sanctions for industrial law, industrial torts, topics and issues of importance in the industrial law field.

MGMT2704

Social Organisation of Work

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Covers the conceptual foundations of industrial sociology, and their application to work practices and institutions. The course will look at the rise of industrial capitalism and trade unionism, work and non-work (including the question of domestic labour), the labour process and work organisation, conflict and control, occupations and the division of labour, divisions in the workforce, technology, skill formation, productivity and flexibility, and the changing nature of work in the late 20th century.

MGMT2715

Labour History

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Exclusion: Aust2017. Focuses on the transformation of working life in nineteenth and twentieth century Australia and changes in management. Considers the origins and development of the Australian labour movement and laborism. Themes covered include the nature and purpose of historical inquiry and research methods; the origins and development of labour markets and trade unions; the emergence of working class culture and consciousness; the influence of gender, race, ethnicity and locality on worker outlook and agency; worker political mobilisation and the rise of party politics; the role of the state in industrial relations; and the impact of radical ideologies; immigrant and Aboriginal workers and the role of women in paid employment. (NB: This course is only offered once every two years. Please consult the School's timetable for availability).

MGMT2718

Human Resource Management

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Looks at management of paid employment in Australia. It covers contemporary management thinking; issues in managing people - problem solving, leadership, power, communications and managing in an organisation - group dynamics and supervision, setting goals and performance appraisal, developing individual and organisational resources, career planning.

MGMT2721

Managing People

School of Organisation and Management

UOC6 HPW3

This course can not be undertaken by students majoring in HRM or students in the Faculty of Commerce.

It focuses on managing in a rapidly changing environment. Topics include: leadership, decision-making and innovation; power, legitimacy, and the socialisation process; the structure and design of organisations, organisation and domination, the evolution of ethical awareness; intergroup conflict and conflict resolution; skills of managing - communication, negotiation, coaching and objectives setting; organisational culture and transformation.

MGMT2724

Health and Safety at Work

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Examines the incidence, origins and management of occupational health and safety problems. It assesses the contribution of technical and social science disciplines to understanding and addressing occupational injury and disease. The role of management, government and trade unions in addressing health and safety will also be critically assessed. Topics covered include the incidence and nature of occupational illness; theories of injury causation; explaining occupational disease; occupation stress; shiftwork;

repetition strain injury; the regulation of occupational illness; workers compensation and rehabilitation; management and union approaches; safety engineering; noise; hazardous substances; and case study.

MGMT3101

International Business Strategy

School of Organisation and Management

UOC6 HPW3

Prerequisite: IBUS2101 or MGMT2101

This course covers the fundamentals of strategic management from the perspective of both large and small organisations operating internationally. It thus builds directly on prior studies in international business and focuses on corporate and business level strategies, rather than functional strategies. Particular emphasis is given to the dynamics of the competitive environment and emerging issues. Major topics include: theoretical perspectives on strategic management in the international business arena; the interface between the firm's internal and external environments; country selection; mergers and acquisitions; management of strategic alliances; the role of government in international strategy; emerging technologies and intellectual property; strategic use of international standards; and international entrepreneurship.

MGMT3102

Asia-Pacific Business

School of Organisation and Management

UOC6 HPW3

Prerequisite: IBUS2101 or MGMT2101

What explains the success of Asian enterprises? This course provides an insight into the dynamics of Asian business systems in Japan, Korea, China, India, Taiwan, Hong Kong and Singapore. Topics include: the institutional and policy context of dynamic learning and innovation in Asian business; strategy and structure of multinational companies from Asia; paradigms of industrial development; state guided capitalism; the role of networks, markets, and non-market institutions; role of foreign direct investment and export promotion in the Asia Pacific. Attention is directed to the dynamic institutional context of Asian business, the nature and source of competitive advantage of domestic enterprises, and the comparative aspects of developing and managing multinational and domestic enterprises across the region.

MGMT3702

International Human Resource Management Practice

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB2718 or MGMT2718

Examines from both applied and theoretical perspectives the effect of national culture on the processes and systems associated with managing human resources across cultural boundaries, as in the case of multinational corporations. The opening topics look at the conceptual and methodological difficulties and challenges facing the practice and research of International HRM. Other topics include: the role of culture in configuring the perceptions and actions of managers and subordinates; HRM systems as cultural artefacts; the clash between culturally diverse indigenous HRM frameworks; and the problems associated with transferring HR management systems across cultural boundaries. Also examines practical issues such as: the selection, preparation, training and management of expatriates, host-country nationals and third-country nationals for international assignments, developing intercultural competence, managing cultural adaptation at the individual and system levels, and the HR processes involved in staffing joint venture partnerships. Case study material used throughout the course is drawn from both Asia-Pacific and European regions.

MGMT3705

Management and Employment Relations

School of Organisation and Management

UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Covers: organisations of employers; employer organisation structure and strategy; employer associations relations with firms; multi-employer and single employer bargaining; corporate strategy; the structure of private and public sector organisations in relation to their environments; management values and ideology regarding employee motivation and regulation; management strategy and practice regarding employees and unions; the personnel and industrial relations function; line management and employee relations; management effectiveness in employee relations.

MGMT3708**Research Methods in Employment and Management**

School of Organisation and Management
UOC6 HPW3

This course is designed as an advanced level course for students intending to undertake the fourth year Honours program in the areas of Employment and Management. It examines the philosophical foundations of the various approaches and the contributions of basic social science disciplines to the study of employment and management studies. The course will provide students with research philosophy, strategy, design, and execution skills. Topics include disciplinary perspectives on employment and management, the foundations of social science and competing paradigms used in research, identifying research topic, strategy, design and a variety of research methods - case-study and field research, comparative method, historical analysis, interviewing, focus groups, survey design and analysis.

MGMT3721**Negotiation Skills**

School of Organisation and Management
UOC6 HPW3

This course provides a set of generic concepts and skills for negotiation and resolving interpersonal and inter-group conflicts. Students gain the opportunity to work with theory, skills and processes of negotiation relevant to a wide range of contexts: commercial; organisational; community; political and public policy; legal; and industrial relations. This course will provide an analytical understanding of negotiations, including negotiation planning, strategy and tactics, as well as the development of the practical skills necessary for implementation of this knowledge. Students will gain these practical skills through participation in negotiation seminars. The seminar programme is made up of negotiation role play exercises which develop in complexity as the course progresses.

MGMT3724**Strategic Human Resource Management**

School of Organisation and Management
UOC6 HPW3

Prerequisite: IROB2718 or MGMT2718

This course deals with the ways in which strategic thinking can be applied to Human Resource Management. It aims to provide students with opportunities to synthesise managerial strategy issues with HRM processes, in a considered and reflective manner. The course focuses on the way strategies can be formed and enacted in organisations, and on the internal and external environmental contexts from which human resource strategies emerge. It also deals with a range of contemporary issues in human resource management against a backdrop of new and changing people management practices. In this course how can people manage and enhance organisational performance? How can we integrate stakeholder concerns into organisational decisions and strategies? How can strategic thinking underpin HRM activities? What are the barriers to strategic thinking in organisations? What does it mean to be a HR professional? Students are given the opportunity to enhance their skills in teamwork, organisational analysis, problem solving and strategic thinking - through fieldwork, case studies and seminars.

MGMT3728**Managing Pay and Performance**

School of Organisation and Management
UOC6 HPW3

Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Examines contemporary remuneration and performance management from both applied and theoretical perspectives, emphasising theories, practices and forces associated with the current trend away from traditional fixed, job-based pay to variable, person-based and performance-based remuneration. Topics covered include: HRM and the New Pay, motivation theory, fair pay, job evaluation, pay for skill and competencies, merit pay, recognition awards, performance appraisal vs performance management, broadbanding, team-based pay, gainsharing, employee share ownership, and executive pay. Also examines strategies for achieving an efficient and equitable mix of pay methods appropriate to particular levels of the workforce, from senior executives to non-managerial workers. Case study material is used throughout.

MGMT3729**Managing Workplace Training**

School of Organisation and Management
UOC6 HPW3

Prerequisite: IROB2718 or MGMT2718

Skill formation and training have become central features of public policy and human resource management. This course introduces students to the theory and practice of workplace training, and to the public policies and regulations that shape such training. It is designed to build on and complement the content of nationally recognised training qualifications in Assessment and Workplace Training. Issues covered include - the context of training; learning in theory and practice; the nature of skill; training needs analysis, delivery and evaluation; competency-based training; the National Training Framework; training and employment policies; management education and development.

MGMT4731**Theory in Organisation & Management Studies**

School of Organisation and Management
UOC6 HPW3

This course introduces students to the theoretical literature, debates, controversies and empirical studies in the disciplinary areas of strategic management, employment relations, human resource management, organisational behaviour and international business. The course emphasises the multi-disciplinary nature and evolution of management and organisational research.

MGMT4732**Methodology in Organisation and Management Studies**

School of Organisation and Management
UOC6 HPW3

This course introduces students to the variety of social science research methods applicable to employment and management. Particular focus is given to the major qualitative and quantitative methodologies adopted by scholars in their studies of strategic management, employment relations, human resource management, organisational behaviour and international business. These are explored through seminars and project-based applications.

MGMT4738**Thesis (Human Resource Management)**

School of Organisation and Management
UOC12 HPW3

Prerequisite: IROB3708 or MGMT3708, admission to Honours in Human Resource Management.

MICR2011**Microbiology 1**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR2201; Corequisite: BIOC2201, BIOS2021 or BIOS2621.

This course is for students majoring in microbiology and who wish to enlarge their knowledge and skills in microbiology beyond those obtained in Fundamentals of Microbiology & Immunology or equivalent courses at other institutions. The biology, diversity and function of bacteria. Modern approaches to bacterial diversity through the use of bioinformatics. Comparative aspects of microbial growth. Bacterial nutrition and biosynthetic pathways. Microbial survival and global responses to environmental stimuli. Theory and practice of sterilization. Action of antimicrobial agents. Introduction to microbial ecology, medical and industrial microbiology.

MICR2201**Fundamentals of Microbiology and Immunology**

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOS1201 (Except for Postgraduate Students).

This course is designed to give undergraduate and post graduate students a solid background in fundamentals of microbiology and immunology. The course introduces the student to the fascinating world of microorganisms: their ubiquity, peculiarities and the three domains of life i.e. Bacteria, Archaea and Eucarya. Most of the course will consider bacteria, fungi, yeasts and viruses in our every day life and how their activities impinge on our well being.

Metabolism and growth, microbial death & microbial genetics will be introduced to the students. Practical aspects of microbiology will be considered such as food intoxication, infection, spoilage and food fermentation. The immune system & the study of immunology will also be introduced in this course. This introduction will encourage the student to question controversial areas of microbiology and immunology such as AIDS. Immunization, environmental pollution, food hygiene, food spoilage causes and prevention etc.

Note: BIOS1101 is recommended. No prerequisites/corequisites are required for Postgraduate students.

MICR3021

Microbial Genetics

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: 12 Units of Credit from MICR2011 or MICR2611 or BIOS2021 or BIOS2621 or BIOC2201; Excluded: MICR3621.

This course provides a broad coverage of material describing the fundamentals of microbial genetics. The course differs from MICR3621 Microbial Genetics (Advanced) by requiring less contact time in terms of laboratory practicals and tutorials, and laboratory and lecture assessment. The course is intended for students interested in gaining a background in molecular biology/genetics and those considering Molecular Biology, Microbiology, Medical Microbiology and Immunology and Genetics majors.

Main topics include genetics of bacteriophage, bacteria and yeasts, mutation and repair, plasmids, gene transfer, transposable genetic elements, gene cloning (genetic engineering) and two component regulatory systems. The practical component includes a range of contemporary microbial genetics experiments that complement lecture material. They may include experiments involving bacteria, archaea, or yeast involving transposon mutagenesis, gene library construction, gene complementation using recombinant plasmids, gene expression and regulation studies, UV mutagenesis and DNA repair, restriction/modification systems, promoter rescue experiments, and a variety of gene exchange techniques. The socioeconomic impact of microbial genetics is also discussed.

Note: Replaces BIOT3031

MICR3031

Eukaryotic Microbiology (UTS)

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR2011

This course provides an opportunity for students interested in a broad education in medical microbiology to undertake studies in the areas of parasitology and mycology. The unit is offered by agreement with the University of Technology, Sydney, and is taught at the Gore Hill Campus of UTS. The course offers students training in the principals and practices of medical laboratory parasitology and mycology. The parasitology component covers the identification of parasitic worms, insects and protozoa. Mechanisms of disease is also covered. The mycology component examines pathogenic yeasts and fungi, their identification and mechanisms of disease. The course is supported by a comprehensive laboratory program.

Note: Enrolment limited to 20 students. If oversubscribed, placements awarded according to achievements in Level 1, 2 and 3 courses. To avoid complications with HECS/ fees payments, students should enrol in this course through UTS, not UNSW, and have the units of credit transferred towards the UNSW degree.

MICR3041

Immunology 1

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: BIOC2101 or (BIOC2181 and MICR2201); Excluded: MICR3641, MICR3042.

This course provides a broad coverage of material describing the principles of immunology. There is a significant component of self-directed learning, including internet-based tutorials and assignments. The course is intended for students majoring in any area of Life Science or Medical Science interested in gaining a background in Immunology, and for those undertaking Microbiology or Medical Microbiology and Immunology majors. Topics addressed include the multiple components of the immune response and how they interact; an introduction to the concepts behind the regulation of the immune response; and introduction to the applied and clinical aspects of immunology, including allergy, transplantation and immunodeficiency. An element of choice in assessment tasks enables students to pursue in some depth an area of immunology which particularly interests them.

MICR3051

Immunology 2

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR3041 or MICR3641

This course takes students to the frontiers of immunological knowledge, exploring conflicting theories of immunological function and regulation, and highlighting new therapeutic strategies that build upon a knowledge of immunology. Students are also introduced to research techniques ranging from the use of knockout and transgenic animals to mathematical modelling. In addition, major topics of study include the immunogenetics of the molecules of recognition, cytokines and their regulation and lymphocyte biology. Issues arising from the public debate surrounding vaccination are an additional major focus of this course.

MICR3061

Viruses and Disease

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR2011

The course explores the biology of viruses and their unique strategic properties that enable their persistence. We will examine virus structure, classification and replication strategies, epidemiology, molecular virology, laboratory diagnosis, and applications of viruses in biotechnology, including gene therapy. The pathogenesis of a number of human, animal and plant diseases is discussed in the context of virus-host interactions, as well as the persistence, transfer and control of virus infections in the community. A WebCT component of the course allows students to engage in on-line computer activities including virtual experiments, electron micrograph identification, group discussions and research for the final consultancy brief project. The final "consultancy brief" project provides students with an opportunity to gain experience in working in consultancy teams, utilise the WebCT platform for discussions to facilitate research on a current topic in virology for a "client", and produce a professional report and a short seminar.

Note: Highly recommended: BIOC2201

MICR3071

Environmental Microbiology

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR2201

The field of Environmental Microbiology offers great potential for the development of new and innovative strategies and products for the management and protection of the environment. In this course, students learn of the vital role of microbes in marine, freshwater and terrestrial ecosystems by exploring the dynamic interactions that take place between microbial communities, the surroundings and higher organisms.

A series of lectures and practical sessions cover key themes in contemporary environmental microbiology including sensing and adaptive responses of bacteria, biogeochemical cycling and microbial communities and interactions. Laboratory sessions allow students to gain experience in the experimental design and practical skills of research in the context of mini-research projects into modern environmental issues. Students will gain theoretical and practical experience in modern molecular techniques for the detection, phylogeny and tracking of microbial communities. A WebCT component of the course is used to support laboratory activities and to help students track their own progress and understanding of the course content. This course emphasises how the principles and techniques of Environmental Microbiology can be applied to a range of environmental problems and lead to the development of sustainable resources and commercial applications, as expanded in Environmental Biotechnology (BIOT3081).

Note: Highly recommended: MICR2011, BIOC2201, BIOS2021 or BIOS2621.

MICR3081

Bacteria and Disease

School of Biotechnology and Biomolecular Science
UOC6 HPW6

Prerequisite: MICR2011

Bacteria and Disease aims to develop a high level understanding of bacterial pathogenesis, disease control and prevention. We examine in depth a select number of pathogens that portray the diverse characteristics seen in different pathogenic bacterial species. In conjunction with the lecture program, contemporary medical laboratory training is given through a simulated diagnostic unit. Development of communication skills constitutes part of this course.

Note: Highly recommended: MICR3041 or MICR3641.

Half of the compulsory practical component of this course consists of seven practical classes run over four days during the mid-session break. In-session time, 6 practical classes will be run in weeks 10 through 14.

MICR3611**Microbial Physiology: A Molecular Approach**

School of Biotechnology and Biomolecular Science

UOC6 HPW6

Prerequisite/s: MICR3021 or MICR3621 Excluded: MICR3011

The goal of this course is to combine theory introduced in previous courses with an understanding of how modern research endeavours are approached. This goal will be achieved by linking lectures and laboratories to contemporary research in molecular aspects of microbial physiology. Lectures will address molecular mechanisms involved in: determining microbial cell shape, cell division, sensing and responding to environmental signals, strategies for survival in extreme and stressful environments, and regulation of the synthesis of gene products. The lecture series also contains a module outlining the commercialisation of scientific discoveries. The practical program involves planning and implementing a research project in consultation with the course supervisor. Students will be challenged to identify relevant research problems, to generate feasible solutions to these problems, and to carry out critical peer review. The research training through lectures and practicals provides a solid basis for undertaking research in the Honours year.

MICR3621**Microbial Genetics (Advanced)**

School of Biotechnology and Biomolecular Science

UOC6 HPW6

Prerequisite(s): 12 Units of Credit from MICR2011 or MICR2611 or BIOS2021 or BIOS2621 or BIOC2201; Excluded: BIOT3031, MICR3021.

Course available to Advanced Science students, or as an advanced option to non-Advanced Science students. This advanced course differs from MICR3021 Microbial Genetics by providing additional laboratory practicals, laboratory tutorials and laboratory assessment, a number of advanced level lectures (presently two), and different questions (both in content and number) in lecture based assessment. The course aims to extend fundamental concepts and principles of microbial genetics to an advanced level. The course is intended to be particularly useful for students interested in molecular biology/ genetics and those considering Molecular Biology and Microbiology majors.

Main topics include genetics of bacteriophage, bacteria and yeasts, mutation and repair, plasmids, gene transfer, transposable genetic elements, gene cloning (genetic engineering) and two component regulatory systems. The practical component includes a range of contemporary microbial genetics experiments that complement lecture material. They may include experiments involving bacteria, archaea or yeast, involving transposon mutagenesis, gene library construction, gene complementation using recombinant plasmids, gene expression and regulation studies, UV mutagenesis and DNA repair, restriction/modification systems, promoter rescue experiments, and a variety of gene exchange techniques. The socioeconomic impact of microbial genetics is also discussed.

Note: Replaces BIOT3031**MICR3641****Immunology 1 (Advanced)**

School of Biotechnology and Biomolecular Science

UOC6 HPW6

Prerequisite: BIOC2101 or (BIOC2181 and MICR2201); Excluded: MICR3041, MICR3042.

This advanced course differs from MICR3041 Immunology 1 by providing advanced level laboratory practicals incorporating design and performance of experiments, advanced level problem-solving tutorials, and different questions (both in content and number) in examinations. There is also a significant component of self-directed learning, including internet-based tutorials and assignments. The course aims to extend fundamental concepts and principles of immunology to an advanced level, and to promote both theoretical and practical problem solving skills. The course will be particularly useful for students considering Immunology and Microbiology majors.

Topics addressed include the multiple components of the immune response and how they interact; an introduction to the concepts behind the regulation of the immune response; and introduction to the applied and clinical aspects of immunology. There will be an emphasis on experimental design and performance as applied to solving immunological problems, and students will be expected to apply their basic knowledge to various research and "real-life" scenarios. An element of choice in assessment tasks enables students to pursue, in some depth, an area of immunology which particularly interests them.

This course is available to Advanced Science and Medical Science students, and to students from other degree programs with a particular interest in Immunology and a Credit average in relevant courses.

Note: Maximum enrolment limited to 25 students.**MICR4013****Microbiology Honours Full-Time**

School of Biotechnology and Biomolecular Science

UOC24

Advanced training in selected areas of Microbiology and Immunology: a formal component consisting of seminars, tutorials, use of information science in biology and written assignments, plus a supervised research program in a specific area of microbiology or immunology. Choice of research projects in laboratories that provide extensive training in one or more of the following: biotechnology, bioinformatics, molecular biology, cell biology, cell culture, immunogenetics, clinical microbiology, medical microbiology, microbial genetics, diagnostics, bioremediation, environmental microbiology, flow cytometry and confocal laser microscopy.

MINE1010**Introduction to Mining Engineering**

School of Mining Engineering

UOC6 HPW4

This course provides the basic introduction to the profession of mining engineering for all new students. Bearing this in mind, at the completion of this course a student should: appreciate the range of roles and responsibilities a mining engineer encounters in the workplace, and the broad range of career paths available; have a basic understanding of underground and open cut mining methods and an introductory appreciation of the importance and relevance of the science and other engineering disciplines to mining; be familiar with basic mine ventilation, explosives and blasting; understand and appreciate the importance of safety and risk management in the workplace; be confident in appreciating the history and current status of mining in Australia with a particular understanding of economic, social and environmental issues; be prepared for what you may encounter in your first industrial training period.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.**MINE1020****Mining Industry Practice**

School of Mining Engineering

UOC6 HPW4

The course aims to build on the students earlier introduction by developing their understanding in areas associated with processes and practices in the minerals industry. The course covers: mineral economics and markets; environmental responsibilities, management and rehabilitation. communication needs within the industry and society and common techniques used to convey information. These include computer packages, web pages, internet, email, role plays, presentation skills, technical drawing and graphical presentation, report writing, resume preparation, research methodologies. an overview of engineering drawing fundamentals. risk management - MISHC Component 1: Introduction to risk management. **Note:** Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE1010

MINE1300**Applied Mechanics**

School of Mining Engineering

UOC6 HPW4

To provide students with an understanding of the basic engineering principles governing the statics, kinematics and dynamics of rigid bodies as applied to mechanical components. Statics: definition of force and moment, static equilibrium of rigid bodies, statical equivalence of systems of forces, centre of mass, centroid, centre of pressure, frictional forces. Kinematics: linear and angular motion, motion in a plane, relative displacement, velocity and acceleration. Dynamics: equations of motion for rigid body, work and energy, impulse and momentum, strain energy.

Upon successful completion of the course, the student will be able to apply the principles of statics and dynamics outlined above to the analysis of systems of forces, the motion of mechanisms and the relation between forces applied to an object and the resulting motion.

MINE2010**Mining Project Development**

School of Mining Engineering

UOC6 HPW4

The course covers the interaction between the core processes of the mining system. Exploration. Planning and the development of mines, infrastructure requirements; environmental assessment. Ore body parameters for surface and underground mines; stratified and non-stratified deposits; mine layout for surface and underground operations; underground access; introduction of techniques of rock breakage and support for coal and metal mines; processing of minerals; disposal of overburden and rejects rehabilitation.

The course also includes an introduction to the principles of project management.

On completion of the course the student should have an understanding of the different processes involved in a mining project providing the context for the various specialist courses offered in subsequent years of the mining engineering program.

Note: Visits to mines and related undertakings are a requirement of this course.

Assumed Knowledge: 1020

MINE2310

Structural Mechanics

School of Mining Engineering
UOC6 HPW4

To provide students with an understanding of the principles of analysis and design of structures and the concepts of stress and strain. Basic definition of force, displacement, stress, strain and elastic material properties. Forces and stresses in pin jointed frames; bending moment, shear force in beams; stress due to bending of beams; deflection of beams; buckling of struts; stress due to torsion of shafts; combined axial and bending stress; stress in thin walled pressure vessels. Shear stresses in beams. Continuous beams: Slope-deflection equations, stiffness matrix and nodal force vector, computer analysis. Definition of stress in three dimensions. Stress transformation in two dimensions; principal stresses in two dimensions. Mohr's circle of stress. Definition of strain and strain-displacement relations in two dimensions; strain transformation and principal strains in two dimensions; isotropic elasticity.

Upon successful completion of the course, the student will be able to calculate stresses and displacements of simple skeletal structures according to the theory generally applied in engineering practice, and will be aware of the circumstances in which that theory may not yield results of adequate accuracy. The student will also be able to carry out some analysis of the states of stress and strain in a material, for the cases of plane strain and plane stress.

Assumed Knowledge: 1300

MINE2320

Mining Stress Analysis

School of Mining Engineering
UOC3 HPW3

To provide an understanding of stress analysis that can be applied to geotechnical engineering. Stress transformation and principal stresses in three dimensions; strain-displacement relations in three dimensions; strain transformation and principal strains in three dimensions; equations of equilibrium, boundary conditions; strain compatibility and the Airy stress function; stress in thick walled tubes under pressure; stresses around circular tunnel; anisotropic elasticity; the equivalent continuum; elastoplasticity.

Upon successful completion of the course, the student will be able to analyse the states of stress and strain in a material for the general three dimensional case, solve simple boundary value problems of plane strain for an elastic material, and idealise a mass of rock or soil as an anisotropic or elastoplastic material as required in the application of computational methods of stress analysis.

Assumed Knowledge: MINE2310

MINE2500

Fluids & Thermodynamics

School of Mining Engineering
UOC6 HPW4

To give students the underpinning knowledge that is applied to the physical environments encountered in mines and the behaviour of liquids and gases in mine services and mineral processing. Fluid mechanics: properties, fluid statics, steady and unsteady flow, laminar and turbulent flow, Reynold's number, acceleration of a fluid particle, continuity equation, steady flow for stream-tube, momentum equation, Bernoulli's equation, measurement of flow, laminar flow between parallel

plates, flow in pipelines, open channels, head losses at enlargements, contractions, bends. Thermodynamics: states, ideal gas, definition of temperature scale, real gases, equilibrium diagram, p-v diagram, steam tables. Systems, processes and cycles, first law of thermodynamics, internal energy, mechanical work, polytropic processes, steady flow systems, enthalpy, the Rankine cycle, heat engines, heat pumps, entropy, gaseous mixtures, psychrometry.

Assumed Knowledge: MINE1300

MINE2700

Mining Data Analysis

School of Mining Engineering
UOC3 HPW2

Mining and minerals processing involves materials which are variable in composition and physical characteristics. Mining Engineers are required to make decisions and projections on the basis of incomplete information and experimentation. They need to manage a range of risks on the basis of probability and levels of confidence. These activities require the use of statistical tools developed to provide quantitative information from variable data with known levels of confidence. This subject provides the basis for designing investigations, presenting data, and forming statistically valid engineering conclusions. Precision, accuracy, approximation, bias. Samples and sampling. Averages (mean, median, mode). Graphical data analysis. Arithmetic, logarithmic and exponential relationships. Correlation coefficients (r). Index numbers and time series. Review of probability, random variables and their properties. Quartiles and percentiles. The normal and binomial distribution. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- tests. Simple and multiple linear regression. Design and analysis of investigations, analysis of variance and introduction to factorial designs. Applications will be drawn primarily from the fields of mining and minerals engineering.

Assumed Knowledge: MATH1231.

MINE3210

Resource Mining Control Systems

School of Mining Engineering
UOC3 HPW2

Resource mining control systems exist in order to ensure optimum exploitation of the in situ economic resource. This course covers the various elements necessary in designing appropriate control systems including estimation of the distribution and grade of economic minerals, and of the tonnes and grade of ore/coal as mined; alternate feedback

mechanisms used in forecasting; grade control; sampling theory, calculation of fundamental sampling error, design of sampling protocols; the use of univariate and bivariate statistics in evaluating the quality of sample analytical data; geostatistical modelling including spatial statistics, continuity and variography; grade interpolation and block modelling; and, reconciliation and other feedback mechanisms.

On completion of this course the student should be able to design or review the effectiveness of resource control systems used in a mining operation.

MINE3300

Mining Geomechanics

School of Mining Engineering
UOC6 HPW4

This course provides an understanding of the principles of soil and rock mechanics and the impacts of these disciplines in mining engineering practice. Soil Mechanics: nature of soil, groundwater flow, stability of slopes, tailings storage facilities, earth retaining structures, shallow foundations, consolidation, compaction, liquefaction. Rock Mechanics: principles applied to mining; stress, strain, deformational behaviour and stiffness; time dependency and stress in rock; rock properties, rock failure criteria, discontinuities in rock, rock mass classification, stresses around excavations, laboratory techniques and experiments.

Assumed Knowledge: MINE2320

MINE3410

Coal Mining Systems

School of Mining Engineering
UOC6 HPW4

This course provides a comprehensive understanding of mining systems that are used in the underground and surface coal mining sector. History, significance and characteristics of the global and the Australian mining

industry. Detailed descriptions and selection criteria for various coal mining methods including surface and underground techniques.

Introductory mine planning and scheduling. Focus will be on the examination of the core risk of each mining method including safety, environmental and economic. Case studies are a feature of the course.

On completion of this course the student should be able to demonstrate a sound working knowledge of mining techniques used in the Australian coal mining industry and be able to apply that knowledge to enable the safe, economic and responsible recovery of ores from any type of coal deposit.

NB: Site visits and industry lectures are a requirement of the course and may involve additional expense.

MINE3420

Metal Mining Systems

School of Mining Engineering
UOC6 HPW4

This course provides a comprehensive understanding of mining systems that are used in metal mines and extractive industries. History, significance and characteristics of the global and the Australian mining industry. Detailed descriptions and selection criteria for various metalliferous mining methods including surface and underground techniques. Introductory mine planning and scheduling. Focus will be on the examination of the core risk of each mining method including safety, environmental and economic. Case studies are a feature of the course.

On completion of this course the student should be able to demonstrate a sound working knowledge of mining techniques used in the Australian mining industry and be able to apply that knowledge to enable the safe, economic and responsible recovery of ores from any type of orebody.

NB: Site visits and industry lectures are a requirement of the course and may involve additional expense.

MINE3500

Mine Workplace Environment

School of Mining Engineering
UOC6 HPW5

This course provides knowledge underpinning: the supply and control of air for underground mines and the removal of contaminants; the supply, control and removal of water in mining operations; other potential high consequence hazards in a mine including outbursts, explosions, fires, spontaneous combustion, inrush hazards, radiation, windblasts, noise, miners' diseases and illumination in mines. Mine ventilation: practice in mines, airflow, resistance of workings and distribution of mine air, network analysis, fans and their operation, auxiliary ventilation, economic size of airways; ventilation surveys. Mine gases and dust: hazards, occurrence, detection, monitoring and control, physiological effects. Mine climate: physiological effects, air cooling power and control. Ventilation planning: airflow requirements based on pollutant gas, airborne dust, heat and humidity. Outbursts in coal mines. Mine explosions. Mine fires. Spontaneous combustion. Inrush hazards in mines. radiation hazards in mines. Noise, Miners' diseases, illumination, windblasts and ventilation risk management. Mining engineering hydrology, sources of mine water, forecasting water inflows, water balance and reticulation; pump types, pumping and drainage. Hydrology risk analysis.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE2500

MINE3610

Excavation Engineering

School of Mining Engineering
UOC6 HPW5

The course provides an understanding of the various rock breakage technologies used in mining and tunnelling excavations and the various systems for access, development and operations. The course covers: Rock drilling techniques (percussive, rotary and hydraulic), drilling equipment & drill pattern design for headings, stopes and benches in surface and underground mining operations; Types of explosives and their properties; Theories of rock fragmentation by blasting; Various initiation systems; Blasting accessories and their applications; Blast design in underground and surface operations; Blasting hazards and precautionary methods; Design to control blast-induced ground vibrations and airblasts; Special blasting techniques including presplitting, smooth wall blasting, trenching, cast blasting and paddock blasting; Environmental considerations, handling and storage of explosives; Principles of rock cutting; Performance of picks

and free rolling cutters; Cutter tool interaction; Design of cutting arrays for machine mining and tunnelling; Cutting tool materials and effect of tool metallurgy on wear and fracture resistance; Methods of assessing rock cuttability; Site investigation and site preparation; Tunnelling methods; Conventional and mechanical excavation systems including drilling and blasting, roadheader, tunnel boring machines, pipe-jacking; Excavation in difficult ground; Shaft sinking methods (both vertical and inclined shafts), conventional and mechanical boring.

On completion of the course the student should have an understanding of the various methods, issues and design principles associated with the main forms of rock breakage (drill & blast and machine mining) and the application of these processes to mining and tunnelling.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

MINE3620

Mine Infrastructure and Services

School of Mining Engineering
UOC3 HPW3

The course provides an understanding of material handling systems used in mining and the various infrastructure needs to support mining operations including power reticulation and control systems. The course covers: Transport systems for minerals, waste rock, people and materials; Design of conveyor systems; Trackless methods of haulage - shovels, loaders and trucks; Track mounted methods; Mechanics of hoisting and design of winding systems; Winding cycle diagrams and power requirements for hoisting; Winding ropes; Safety aspects, maintenance of haulage and winding systems; Mine power requirements and reticulation; Electrical power distribution in surface and underground operations; Mine cables and switch gear; Explosion-protected electrical devices; Fault protection and risk analysis; Design and operational characteristics of electric, diesel, hydraulic and pneumatic motors and drive systems; Speed and torque control; Fluid characteristics; Mine control systems; Signalling and communications; Types and designs of control systems.

On completion of the course the student should have an understanding of the design principles related to principles methods of bulk materials haulage used in and about mine sites and the services required to support a mining operation.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

MINE3710

Mine Economics and Business Systems

School of Mining Engineering
UOC6 HPW4

The course provides an understanding of management principles and perspectives that can be applied in mining. The Mine Economics component of this course reflects the fact that mining is an economic activity. It will cover the principles and techniques of project evaluation and the construction of fully integrated and internally consistent technical/financial computer models of mining projects. The Business Systems component will cover issues vital to a mine manager's successful running of a mining enterprise.

On completion of the course the student should be able to demonstrate a sound working knowledge of: the time value of money; discounted cash flow evaluation techniques; technical/financial model examples and assignments; commodity markets, revenue estimation, risk analysis and project financing; company financial statements and underlying accounting principles; the feasibility study process; determination of economic cut-off grades and resources and reserves estimation; legal aspects of managing a mine; and, theory and processes of management including human behaviour, industrial relations, contracts & contractors, financial statements & financial ratios, and management in an international context.

MINE3800

Mineral Processing

School of Mining Engineering
UOC3 HPW3

Minerals Engineering is the link between mining and the utilisation of mineral resources, and is a key operation in the minerals industry. By a combination of breakage, sizing, separation, and dewatering processes, valuable components in mined material are concentrated into products suitable for subsequent hydrometallurgical or pyrometallurgical processing or direct utilisation. Minerals engineering processes are applied in the treatment of precious metal and gemstone deposits, base

metal ores, heavy mineral beach sands, coal, and industrial minerals such as clays and aggregates. This introductory course provides a description of the principal unit processes and their applicability, and of the mineral properties and characteristics of mined materials on which they are based. On completion, you will be able to carry out calculations relating to the characterisation of mined materials, carry out materials balance calculations for simple mineral processing circuits, and nominate appropriate processes for their beneficiation. For many of those processes you will also be able to determine equipment sizes for specified duties. Topics include: Rocks, minerals and ores. Grades, recoveries. Materials balances. Liberation. Comminution (crushing and grinding). Screening. Size classification. Dry and water-based separation processes. Dense media separation. Surface properties of liquids and solids. Froth flotation. Leaching processes. Screens and centrifuges. Flocculation and thickening. Filtration. Tailings disposal. A series of laboratory investigations forms part of the course.

Assumed Knowledge: PHYS1169, CHEM1817, MINE2500 (or equivalents)

MINE4210

Mine Planning

School of Mining Engineering
UOC6 HPW5

The course provides an understanding of the fundamentals of the mine planning process including design, scheduling and evaluation, and the tools available to assist in the planning process. The course covers: the mine planning process; strategic planning and tactical planning; mine design, economic cut-off grade and optimisation; resource estimation; scheduling; feasibility studies; economic modelling; equipment selection; mine systems selection; performance benchmarks for operations; project risks; environment and mine site rehabilitation planning; government regulations; and an introduction to computer tools to assist in mine planning.

On completion of the course a student should have an understanding of the process to derive an optimum mine plan including an appreciation the various factors and constraints to be considered in the mine planning process; an ability to design a pit shell; construction of a production schedule and creation of an economic model to analyse a mining scenario.

Assumed Knowledge: MINE3710, MINE3400

MINE4220

Coal Mine Design and Evaluation Project

School of Mining Engineering
UOC9 HPW7

The course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering program whilst conforming to industry and community expectations. Technical design and project evaluation of a coal deposit is a core focus of the subject. The work draws on the subject content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a mining project. Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4230

Metal Mine Design and Evaluation Project

School of Mining Engineering
UOC9 HPW7

This course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering

program whilst conforming to industry and community expectations. Technical design and project evaluation of a metalliferous deposit is a core focus of the course. The work draws on the course content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a metal mining project. Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4240

Mine Design and Evaluation Project

School of Mining Engineering
UOC9 HPW7

The course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering program whilst conforming to industry and community expectations. Technical design and project evaluation of a mineral/coal deposit is a core focus of the course. The work draws on the subject content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a mining project. Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4300

Geotechnical Engineering

School of Mining Engineering
UOC6 HPW4

Course content includes the following components across the range of coal and metalliferous mining systems: core geotechnical risks inherent in major mining methods and risk management criteria; hazard recognition, mapping and ground control management plans; underground mining excavation design; rock mass classification; surface mining geomechanics; application of numerical stress analysis modelling; geotechnical instrumentation; pillar and roadway design; principles and practice in ground control; geotechnical role of mine fill systems; rock reinforcement principles and systems; subsidence engineering; roadway and pillar design; caving mechanics, outbursts, rockbursts, wind/airblasts. Case studies, group work and problem-based learning projects will form a major component of this course.

Successful completion of this course will equip the student with the ability to recognise the major geotechnical applications and their significance within the mainstream mining systems and conditions. Students will also have a sound working knowledge of fundamental mechanisms and mining geotechnical principles within the context of practical mining applications.

Note: Site visits and Industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE3300

MINE4410

Industry Applications

School of Mining Engineering
UOC6 HPW4

The course provides the student with an awareness of current issues facing the mining industry. A series of seminars are presented by invited speakers from within the university, other research establishments and selected industrial operations covering topics of special interest.

The course also covers the processes associated with initiating a research project. Candidates are select a research topic related to mining, minerals engineering or other approved topic approved by the Head of School. It is strongly suggested that candidates evaluate various topic options in the period prior to commencement of the course, preferably during the period of Industrial Training. The research project may take the form of an engineering analysis, experimental investigation, theoretical study or design project. Candidates are required to carry out a literature review of the chosen research topic and submit a project plan.

On completion of the course a student should be capable of preparing a report which critically evaluates social and technical issues. In addition, students will develop the knowledge and skills to assimilate current understanding and knowledge on a topic and synthesise this into a written document in support of a major investigation that also includes a formal project plan and risk management plan.

MINE4420

Thesis A

School of Mining Engineering
UOC6 HPW4

The course provides the opportunity for the student to undertake a research project on a mining, minerals engineering or other topic approved by the Course Authority. Candidates are required to submit a dissertation or thesis, a conference paper and make a presentation. The work may take the form of an engineering analysis, experimental investigation, theoretical study or design project.

On completion of the course a student will be capable of carrying out and report on a research project and prepare a draft document for submission to technical conference.

Assumed Knowledge: MINE4410

MINE4430

Thesis B

School of Mining Engineering
UOC6 HPW4

The course provides the opportunity for the student to undertake a research project on a mining, minerals engineering or other topic approved by the Course Authority. Candidates are required to submit a dissertation or thesis, a conference paper and make a presentation. The work may take the form of an engineering analysis, experimental investigation, theoretical study or design project.

On completion of the course a student will be capable of carrying out and report on a research project and prepare a draft document for submission to technical conference.

This course is restricted to students who are eligible and enrolled in either the BE(Mining)/MCom or the BE/MEM combined program.

MINE4500

Sustainable Mining Practices

School of Mining Engineering
UOC3 HPW2

This course provides a comprehensive understanding of the impacts both positive and negative that mining may have on society. International perspective and treaties; sustainable development; corporate responsibility; legislative and regulatory framework; environmental impact assessment; environmental management systems, ISO 14001; corporate reporting; code for environmental management; environmental auditing; risk management; best practice environmental management techniques - exploration; waste disposal; tailings; quarries; water management; air pollution; rehabilitation and mine closure; social impact.

On completion of this course the student should be able to demonstrate a sound working knowledge of the legal and political context; company-based initiatives in environmental management; and state of the art

techniques in environmental management on mine sites. They should also be able to describe the major issues associated with the social/community impacts of mining in Australia and internationally.

MINE4700

Mining Law

School of Mining Engineering
UOC6 HPW5

The course provides an understanding of certain critical management issues of fundamental importance to the mining industry. The course is divided into two main parts. The first is concerned with advanced applications in risk management, in particular the human behavioural side of risk taking, making errors, accident occurrence, ergonomics, as well as application of risk management to some of the major hazards in the coal and metalliferous mining industry. The analysis of mining disasters is covered in the course. The second part of the course covers modern mining law including safety, environment and exploitation of mineral deposits.

On completion of the course the student should be able to demonstrate a sound working knowledge of: the latest concepts in mining law; the fundamentals of risk management; the adoption of risk management tools in the regulatory environment; risk management in specific mining-related processes; environmental risk management; mining and other disasters and the application of risk management techniques; emergency preparedness in the mining industry.

MINE4800

Mine Simulation and Modelling

School of Mining Engineering
UOC3 HPW3

The course aims to equip students with knowledge and skills in two dimensional (2D) and three dimensional (3D) computer simulation software used in the mining industry. Students undertake a critical analysis of simulation software and technology and discuss their findings through an online discussion group with the aim of identifying when, where and how to apply either 2D or 3D computer simulation technology to mine planning or mine operations. A model of a mining system is then designed, built and evaluated using simulation techniques. An informed report is written and presented that discusses the model developed in the course and the conclusions drawn on the application of 2D and 3D simulation to mining operations.

On successful completion of the course students should be able to; identify and select appropriate computer simulation software tools that are available to the mining industry; design, develop and evaluate an interactive computer model of a mining system using 2D and 3D simulation software; visualise disparate mine data within a 3D model and appraise their role in ore deposit modelling; make an informed assessment of when it is appropriate to apply 2D and 3D modelling techniques to mining operations.

MINE4805

Mineral Process Technology

School of Mining Engineering
UOC3 HPW3

Descriptions of principal unit processes are given in MINE3800. This course extends that work by a closer examination of the underlying basis of those unit processes; and aspects of circuit design, equipment selection and process optimisation. On completion, you will be able to carry out advanced calculations relating to the characterisation of mined materials and process performance, and will be able to use such information for process simulation. You will also be familiar with basic flowsheet and plant design considerations, and of the instrumentation and control systems incorporated in mineral processing and coal preparation plants. Topics include: Ore characterisation. Gaudin-Schuhmann plots. Separation and blending equations. Release analysis. Grade-recovery and grade-gradient plots for mineral ores. Process instrumentation and control. Radiation based on-line instrumentation. Review of coal washability. Rosin-Rammler plots. The Mayer curve. Flotation: the Tree procedure. Materials handling: stockpiles and blending. Sampling theory and practice. Process efficiency (partition curves). Processes in parallel and series. Instantaneous grade theory of process optimisation and its application. Physics and chemistry of surfaces. Double layer theory. Rheology of suspensions. Process simulation: comminution, screening, classification, flotation, dense medium cyclones. Simulation software packages. Flow sheet design. Equipment selection and plant layout. Rejects and tailings disposal. Leaching processes and environmental considerations.

Assumed Knowledge: MINE3800

MINE4810**Computational Methods in Geomechanics**

School of Mining Engineering
UOC3 HPW3

To provide students with an understanding of the theory and practice of finite difference, finite element and boundary element methods applied to problems of geomechanics. Boundary value problems, solution of Poisson's equation by finite differences, variational principle for Poisson's equation, stiffness matrix and equivalent nodal force vector, finite elements and matrix assembly, variational statement and finite elements for elasticity, isoparametric elements, modelling techniques, elastoplastic finite element analysis. Indirect and direct boundary element methods for Poisson's equation, isoparametric boundary elements, direct method for elasticity.

Upon successful completion of the course, the student will be able to carry out elastic and elastoplastic analyses of stress in rock, soil and other materials. The student will know for any given problem what input data including material properties are required, which is the most suitable method of analysis, and how to obtain the best possible accuracy with available computing resources.

Assumed Knowledge: MINE2320

MODL2000**Intercultural Communication**

School of Modern Language Studies
UOC6 HPW3

Prerequisite: 36 Level 1 units of credit in Arts, including at least 12 units of credit in a language course or equivalent

Examines the factors which determine our use of verbal and non-verbal language in social interaction across different cultures. Aims to identify and compare the factors which lead to communication breakdown; the expressions of formality, politeness and emotion in a variety of languages. Also considers the issues involved in intercultural adaptation and the impact on one's identity. Designed to complement courses offered in the School of Modern Language Studies by developing learners' intercultural communications skills.

Note: Lectures will be in English with language specific work offered in tutorials.

MODL2002**Introduction to Professional Interpreting**

School of Modern Language Studies
UOC6 HPW3

Prerequisite: 36 Level 1 units of credit in Arts, including at least 12 units of credit in a language course or equivalent

Aims at providing students with foundations of professional interpreting. Essentially a practical course, it deals with subject areas most common in Australia and international contexts. Involves tasks such as dialogue and consecutive interpreting and deals with thematic areas such as welfare, social security, medical and legal. Addresses crucial interpreting and linguistic problems relevant to interpreting: problems of vocabulary, equivalents, syntax, grammar and speech register. Includes the acquisition of interpreter's practical skills and looks at socio cultural aspects of interpreting and professional ethics.

Note: High level of skills in English and a language other than English is a prerequisite. This course is available to students who have completed at least 12 units of credit or equivalent in French, German, Indonesian, Russian or Spanish and students who have completed JAPN3001 or KORE3001 or equivalent.

MSCI2001**Introductory Marine Science**

School of Biological, Earth and Environmental Sciences
UOC6 HPW4

This course introduces students to a cross-section of the theory and application of marine science and includes an opportunity to experience field research. Spanning the disciplines of geology, chemistry, physics, and biology, it provides a fundamental understanding of how oceans work. Topics covered are: the chemistry of seawater; air-sea interactions; ocean circulation; waves, tides, and coastlines; biological productivity and biological diversity.

Note: Compulsory field camp, duration of 4 days. Personal costs will be incurred.

MSCI2051**Coral Reef: Environment and Ecology**

School of Biological, Earth and Environmental Sciences
UOC3

Basic oceanographic processes and how these apply in the Great Barrier Reef, the characteristics of the waters of the Great Barrier Reef; the types and development of reefs, corals and reef communities, environmental damage to corals and exploitation of the reef, management by Great Barrier Reef Marine Park Authority. Laboratory classes include a study of the reef flat, its inhabitants, their distributions and interactions, the reef environment and its measurement.

Note: Available February and July. Personal expenses will be incurred.

MSCI3001**Physical Oceanography**

School of Mathematics
UOC6 HPW4

An introduction to the physical properties and circulation of the oceans. The geography of the sea and properties of seawater. Understanding what controls coastal ocean currents, water-mass formation, upwelling, storm surges and large-scale ocean flow. The dynamics of a range of ocean processes, including waves, tides, beach currents and the El-Nino/Southern Oscillation. Oceanographic instrumentation and the design of ocean measuring programs.

Note: Laboratory and field work.

Assumed knowledge: Any 6 Units of Credit of Level I Mathematics.

MSCI4003**Marine Science 4 Honours Full-Time**

School of Biological, Earth and Environmental Sciences
UOC24 HPW30

MSCI6200**Coastal Monitoring Techniques**

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

General principles of surveying. Optical and electronic methods of distance and elevation measuring. Coastal position fixing. Coordinate systems and their application to coastal mapping. Map projections. Long and short term monitoring of coastal changes. Tides, their measurement.

Note: Field work of up to 4 days is a compulsory part of this course. Students will incur personal costs.

MSCI6300**Coastal Environmental Assessment**

School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The interaction of water masses, bottom sediments and benthic organisms. Sampling techniques, analytical methodology and statistical data evaluation. Environmental assessment of Australia and overseas areas. An important aspect of this course is its practical approach: from data gathering, data evaluation and environmental assessment report writing. Practical work in the course involves each student as an active member of a project team.

Note: Field work of up to 3 days is a compulsory part of this course. Students will incur personal costs. Details will be provided in the first week of the course.

MTRN3201**Digital Logic for Mechatronics**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Excluded: MECH4201, MECH9201, MTRN9201

Introduction. Review of number theory. Symbolic logic. An introduction to TTL compatible devices. Formulation and implementation of problems in logic. Microprocessor architecture. Components of a microprocessor based system. Memory maps. Input/Output devices. Dedicated and special purpose computers. Principal features of a microprocessor based system. Laboratory complement to lectures.

MTRN3202**Microprocessor Control**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: ELEC0807 Excluded: MECH3202, MECH9202, MTRN9202

Microprocessor architecture; introduction to microprocessor programming in assembler and high level languages and specific aspects of programming of a single board (chip) microcomputer; programming concepts. Instruction sets and addressing modes; instruction timing; interrupts. Laboratory complement to lectures based on the use of single board computers.

MTRN3212

Principles of Control of Mechanical Systems

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH3211

Introduction to modern systems analysis. Review of modelling, simulation and non-linear systems. Stability criteria; use of Root Locus and Bode for system analysis and modification. The matrix exponential and state space notation. The transfer matrix. Pole and state feedback, controllability and observability. Use of MATLAB as a simulation environment.

MTRN3530

Computing Applications in Mechanical Systems

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH1500 Excluded: MECH3510

Development of programming skills in the C++ language for applications in Mechanical Engineering. Object Oriented Programming for developing software models of mechanical systems such as open kinematic chains. Development of user machine interfaces for instrumentation, interfacing and measurement. Interrupt service routines and introduction to real-time programming. Development of C++ routines for integration with MATLAB for data acquisition.

MTRN4221

Industrial Robotics

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: MECH3200 or MECH3204, MECH3212 or MTRN3212, MECH3530 or MTRN3530

Automation types; introduction to industrial robots; end effectors. Robotic history, populations and main use; laboratory and PC environments. Kinematics of multidegree of freedom systems; simulation with open systems software. Safety standards; design of installations. Anatomy of an industrial robot as an intelligent machine; robot languages; work cell design. Projects.

MTRN9211

Modelling and Control of Mechatronic Systems 1

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH9211

Development of modelling technique and design of controllers using digital computers, with special emphasis on digital control systems for motion control. Typical examples of mechatronic systems.

MTRN9222

Artificially Intelligent Machines

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4222, MECH9222

The principles of operation of machines into which limited powers of decision making have been delegated. The grouping of intelligent machines. Cognition; sensor technology; parsing; information representation; convolutions; software and hardware environments.

MTRN9223

Machine Condition Monitoring

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Excluded: MECH4223, MTRN8223

Sensors and transducer interfacing to computers. Vibration signatures of faults in rotating and reciprocating machines; detection and diagnosis of faults; characterisation of signatures; prediction of service life and maintenance procedures. Project on measuring a parameter indicating possible failure.

MTRN9224

Robot Design

School of Mechanical and Manufacturing Engineering

UOC6 HPW3

Prerequisite: MTRN3212

The course is aimed at developing skills on how to design and build a robot from scratch. The course primarily contains the following contents: Introduction to robot design. Mechanisms and dynamics of animals. Mechanical design of wheeled, legged and manipulator robots. Calculation of torques and selection of motors. Environment and selection of sensors. Integration of mechatronic systems. Motion planning and control. Design of a robot using CAD. Simulation of a robot using MATLAB/C/C++.

MUSC1001

Music Fundamentals

School of Music and Music Education

UOC6 HPW3

Excluded: MUSI1103, MUSI1301, MUSI1141, MUSI1142

Provides an opportunity for students to develop musicianship through the study of Western music literature, participation in an approved ensemble and attendance at workshops and concerts. Enables students to develop skills such as music literacy, analysis and aural awareness.

MUSC1101

Music Reinvented

School of Music and Music Education

UOC6 HPW3

Excluded: MUSC1001, MUSI1141, MUSI1241, MUSI1003

Designed as an introduction to a wide range of musical styles, techniques and circumstances as well as methods of study in music. Enables students to acquire insight into compositional processes and the place music occupies in different societies. Includes study of early 20th century music and ethnomusicology.

Assumed knowledge: A satisfactory standard in HSC music or in AMEB 7th grade practical (pass) plus 5th grade theory or musicianship.

MUSC1302

Musicianship A

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC1101; Excluded: MUSI1241

Examines the structures and processes of music, focussing on analysis of diatonic harmony in various styles and periods, the observation of harmonic and melodic practices in musical composition and the acquisition of aural and keyboard skills, covering basic musical structures and sight-reading. Requires the successful completion of music literature tests.

Assumed knowledge: A satisfactory standard in HSC music or in AMEB 7th grade practical (pass) plus 5th grade theory or musicianship.

MUSC1312

BA Musicianship A

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC1001 or MUSC1101; Excluded: MUSI1241

Examines the structures and processes of music, focussing on analysis of diatonic harmony in various styles and periods, the observation of harmonic and melodic practices in musical composition and the acquisition of aural skills covering basic musical structures and sight-reading. Requires the successful completion of music literature tests and participation in a performance ensemble.

MUSC1401

Professional Practices A

School of Music and Music Education

UOC6 HPW5

Prerequisite: Enrolment in Program 3425 or 3427; Excluded: MUSI1401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC1402

Professional Practices B

School of Music and Music Education

UOC6 HPW5

Prerequisite: MUSC1401; Excluded: MUSI1402

Continuation of MUSC1401.

MUSC1501**Music Performance 1A**

School of Music and Music Education
UOC6 HPW5

Prerequisite: Enrolment in Program 3426; Excluded: MUSI1501

Includes private tuition on major instrument and participation in university ensembles, plus tutorials on minor studies instruments (guitar and percussion).

MUSC1502**Music Performance 1B**

School of Music and Music Education
UOC6 HPW5

Prerequisite: MUSC1501 or MUSI1501; Excluded: MUSI1502

Continuation of MUSC1501.

MUSC1601**Introduction to Music Education**

School of Music and Music Education
UOC6 HPW3

Prerequisite: Enrolment in Program 3426; Excluded: MUSI1801

Covers basic issues in music education, theory and practice and develops a range of skills, knowledge and understandings associated with classroom teaching at the K-6 level. Also introduces basic teaching skills with opportunities to observe, critically evaluate and practise a variety of music lessons in varying formats. Deals with issues related to the responsibility of a music teacher in relation to the expectations of pupils, parents and employers.

Note: Includes three weeks of practice teaching in primary schools.

MUSC2101**Music of the Baroque**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1302 or MUSC1312 or MUSC2111; Excluded: MUSI1142

A detailed study of 17th and 18th century baroque music. Includes an historical introduction to the issues of performance practice.

MUSC2111**Introduction to Musicology**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1001, MUSC1312; Excluded: MUSI1141, MUSI2311

Designed as an introduction to a wide range of musical styles, techniques and circumstances as well as methods of study in music. Enables students to acquire insight into compositional processes and the place music occupies in different societies. Includes study of early 20th music and ethnomusicology.

MUSC2112**Music of the 18th and 19th Centuries**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1101 and MUSC1302 or MUSC2111 or MUSI1142; Excluded: MUSI2141

A study of Classical and Romantic music in their historical, social and cultural contexts. Includes a seminar in musicological research techniques.

MUSC2132**Music of the late Middle Ages and Renaissance**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI3141

An introduction to Medieval and Renaissance music in its social, historical and cultural contexts.

MUSC2201**Music of Aboriginal Australians**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI2141, AUST2026

A study of traditional and contemporary Aboriginal music in its social, historical and cultural contexts.

MUSC2301**Musicianship B**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1302 or MUSC1242; Excluded: MUSI2241

Extends MUSC1302 by furthering students' knowledge of harmonic vocabulary through the analysis of both diatonic and chromatic harmony and the observation of harmonic and melodic practices in musical composition. Also includes further development of aural skills and a keyboard tutorial which covers score reading and figured bass and completion of music literature tests.

MUSC2302**Musicianship C**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC2301 or MUSI2241; Excluded: MUSI2242

Extends MUSC2301 by furthering students' knowledge of chromatic harmony, analysis and counterpoint. Includes further development of aural, sight-reading and keyboard skills such as improvising an accompaniment and realising figured bass, plus the completion of music literature tests.

MUSC2311**BA Musicianship B**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC1312 or MUSI1242

Extends MUSC1312 by furthering students' knowledge of harmonic vocabulary through the analysis of both diatonic and chromatic harmony and the observation of harmonic and melodic practices in musical composition. Also includes further development of aural skills, completion of music literature tests and one hour participation in a performance ensemble.

MUSC2312**BA Musicianship C**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC2311 or MUSI2241; Excluded: MUSI2242, MUSI3312

Extends MUSC2311 by furthering students' knowledge of chromatic harmony, analysis and counterpoint. Includes further development of aural, sight-reading and keyboard skills such as improvising an accompaniment and realising figured bass, plus the completion of music literature tests.

Note: Includes one hour of performance ensemble participation.

MUSC2332**Electronic Music**

School of Music and Music Education
UOC6 HPW3

Prerequisite: MUSC2301 or MUSC2311 or MUSI2242; Excluded: MUSC3311, MUSI2141, MUSI2142

Examines psychoacoustics and historical foundations of electronic music with practical experiences on a range of software and hardware. Includes use of internet resources.

MUSC2401**Professional Practices C**

School of Music and Music Education
UOC6 HPW5

Prerequisite: MUSC1101, MUSC1302, MUSC1402 or MUSI1142, MUSI1242, MUSI1402; Excluded: MUSI2401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC2402**Professional Practices D**

School of Music and Music Education
UOC6 HPW5

Prerequisite: MUSC2401 or MUSI2401; Excluded: MUSI2402

Continuation of MUSC2401.

MUSC2501**Music Performance 2A**

School of Music and Music Education

UOC6 HPW5

Prerequisite: (MUSC1502, MUSC1101, MUSC1302) or (MUSI1502, MUSI1142, MUSI1242); Excluded: MUSI2501

Includes private tuition on major instrument and participation in university ensembles, plus tutorials on minor studies instruments (brass or woodwind).

MUSC2502**Music Performance 2B**

School of Music and Music Education

UOC6 HPW5

Prerequisite: MUSC2501

Continuation of MUSC2501.

MUSC2601**Introduction to Secondary Music Education**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC1601 or MUSI1802; Excluded: MUSI1801, MUSI2801, MUSI2802

Emphasises high school general classroom music methods for years 7 and 8, by developing strategies for listening, aural and literacy development, music appreciation, performance and creativity (improvisation and composition). Special attention is given to the new curriculum guide and includes techniques for introducing popular music, jazz, and music from other cultures, and evaluating selected documents concerned with professional ethics, and the theory and practice of classroom management. Includes three week practice teaching in a secondary school.

MUSC3101**Professional and Ethical Practices in Music**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2302 or MUSC2312 or MUSI2242; Excluded: MUSI3111

Requires active participation in a seminar devoted to developing an understanding of research methodologies in music across a range of topics. Individually chosen topics provide the subject areas for the class and these lead to detailed discussions of professional and ethical issues.

MUSC3112**Seminar in Musicology**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC3101; Excluded: MUSI3112

Continuation of MUSC3101, a seminar devoted to exploring the processes in research on music through discussion, and the development of individually chosen research projects on a wide range of topics in musicology and ethnomusicology. The seminar culminates in the preparation and submission of a formal research project on an approved topic.

MUSC3131**Jazz and Popular Music**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2302 or MUSC2312

Study of the elements that have shaped and enriched 20th century jazz and popular musics through a chronological study of musical trends within the broad category of jazz. Applies methods drawn from ethnomusicology and cultural studies in order to develop an understanding of the social ecology of each genre studied.

MUSC3162**Twentieth Century Music**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC1101 and MUSC1302 or MUSC2111 or MUSI1142; Excluded: MUSI3142

Focuses on the major trends and developments in 20th century concert music through a study of technical processes in a wide range of listening examples. Includes recent Australian music.

MUSC3212**Music of India**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI3141

Introduces the musical traditions of India in their socio-cultural contexts. Students apply and refine their understanding of aspects of ethnomusicological theory, methods and issues.

MUSC3301**Music Analysis**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2302 or MUSI2312; Excluded: MUSI2241, MUSI2242

Examines the structure and processes of music, focussing on the study of a range of analytical techniques and their application in various styles and periods.

MUSC3302**Orchestration and Arrangement**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2302 or MUSC2312; Excluded: MUSI2121, MUSI2122

Develops skills in arranging, orchestration and preparation of music scores through the study of instrumental techniques, a historically wide range of orchestral scores, listening and practical exercises.

MUSC3331**Advanced Electronic Music**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC3311 or MUSC2332; Excluded: MUSI3141, MUSI3142

Continuation of MUSC3311/MUSC2332 with a specialisation in selected techniques, sound recording, studio work, software and hardware, plus methods of using technology in music composition.

MUSC3401**Advanced Professional Practices A**

School of Music and Music Education

UOC6 HPW5

Prerequisite: MUSC2402 or MUSI2402; Excluded: MUSI3401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC3402**Advanced Professional Practices B**

School of Music and Music Education

UOC6 HPW5

Prerequisite: (MUSC2302, MUSC3401) or (MUSI2242, MUSI3401); Excluded: MUSI3402

Continuation of MUSC3401, but also includes preparation for public recital, and opportunities for further specialisation.

MUSC3501**Advanced Music Performance 3A**

School of Music and Music Education

UOC6 HPW5

Prerequisite: MUSC2502 or MUSI2502; Excluded: MUSI3501

Includes private tuition on major instrument and participation in university ensembles, plus lectures and masterclasses on performance practice, pedagogy and conducting, to refine individual performance skills, and to develop competencies for teaching performance at all levels of the school curriculum.

MUSC3502**Advanced Music Performance 3B**

School of Music and Music Education

UOC6 HPW5

Prerequisite: MUSC2302 and MUSC3501 or MUSI3501

Continuation of MUSC3501, plus masterclasses on performance practice and preparation for recital at end of semester.

MUSC3601**Specialist Studies in Music Education**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2601 or MUSI2802; Excluded: MUSI2801, MUSI3801

Focuses on the elective secondary curriculum and teaching strategies involved in effectively meeting syllabus requirements. Content includes performance, aural perception, literacy development, creativity (improvisation and composition), listening, and a critical evaluation of selected documents concerned with educational policy and practice. Extends previous work by developing effective strategies for classroom management and learning how to cater for the needs of individual learners. Includes three weeks of practice teaching in a secondary school.

MUSC3602**Creativity and Special Topics in Music Education**

School of Music and Music Education

UOC6 HPW4

Prerequisite: MUSC3601; Excluded: MUSI3801, MUSI3802

Extends work covered by providing specialist study in one or more of the following areas: HSC preparation, creativity (improvisation and composition), aesthetics, philosophy of music education, music technology, curriculum development and planning for the needs of special learners.

MUSC3612**Principles and Processes of Music Education**

School of Music and Music Education

UOC6 HPW3

Corequisite: MUSC4602

Examines the scope of recent research in music education and surveys the field of music psychology and sociology, and the methodological approaches to and sources for further investigation specifically related to music teaching and learning. Focuses on the application of these areas in the Australian environment, and examines theories and current research concerned with creativity, musical ability and current issues in studies of music perception and cognition. Aims to expose students to a variety of ideas and trends which confirm or contradict established norms and attitudes on effective music teaching.

Note: At the discretion of the Program Co-ordinator, this course can be used to replace one Education elective.

MUSC4000**Bachelor of Music Honours Full-Time**

School of Music and Music Education

UOC24 HPW5

Prerequisite: Completion of the requirements for the Pass degree with an average of at least Credit

Appropriate seminars in musicology, further development of performance skills and musical leadership, together with a thesis of 15,000 - 20,000 words on a musicological topic, an extended recital or other approved special project.

Note: For BMus and BMusBA students only.

MUSC4001**Music Honours (BA)**

School of Music and Music Education

UOC24 HPW5

Prerequisite: 54 units of credit in Music courses, including MUSC3101 and MUSC3112, with an average of at least Credit

Appropriate seminars in musicology, further development of performance skills and musical leadership, music literature study, together with a thesis of 15,000 - 20,000 words on a musicological topic.

MUSC4002**Music Education Honours**

School of Music and Music Education

UOC24 HPW5

Prerequisite: Completion of the requirements for the Pass degree with an average of at least Credit

Seminars on research methods in music education culminating in a thesis of 15,000-20,000 words on a topic in music education or other approved special project and further study of music.

MUSC4601**Advanced Studies in Music Education**

School of Music and Music Education

UOC6 HPW3

Prerequisite: MUSC2302 and either MUSI3802 or MUSC3602; Excluded: MUSI4801

Develops competencies for teaching music in years 11 and 12 and covers requirements for the Higher School Certificate examinations in music. Lesson styles are examined and methods for designing programs are also considered. An additional component deals with current developments in educational policy and practice plus issues concerned with the professional responsibilities of teachers. Administrative arrangements for the practicum in Session 2, professional ethics, legal responsibilities of teachers, and programming address Objective 5 of the General Education program.

MUSC4602**Music Teaching Experience**

School of Music and Music Education

UOC6 HPW3

Corequisite: MUSC3612

Consists of 35 days experience in a secondary school which allows the observation of lessons conducted by experienced teachers and the planning and delivery of lessons under the direction of supervising teachers, plus the knowledge concerned with the organisational aspects of a high school and activities other than those related to subject delivery, especially school policies and general supervision of school students.

MUSC4650**Conducting**

School of Music and Music Education

UOC6 HPW4

Prerequisite: MUSC3402 or MUSC3502; Corequisite: MUSC4602; Excluded: MUSI4501

Develops proficient skills and confidence in conducting and managing a variety of school ensemble situations including small vocal groups and the larger instrumental ensembles.

NANO1001**Nanotechnology 1**

School of Materials Science and Engineering

UOC3 HPW3

This course will provide students with an overall view of nanotechnology. The course is composed of self-learning modules and a weekly seminar. The seminars will primarily be given by outside speakers discussing different aspects of Nanotechnology including device manufacture, the Nanotech industry, intellectual property and establishing start-up companies. The major component of the topic will be two projects to study the connection between the underlying nanoscience of various nanotechnology devices. Students, in small groups, will undertake studies chosen from each of the major themes of biodevices and nanostructures. Examples from major nanotechnology initiatives will include quantum computing, DNA chips, nanogears, quantum dots, DNA sequencing, nanoparticles, ion-channel biosensors and other examples. Students will prepare written reports and oral presentations of their material.

Note: Available only to students enrolled in program 3617

NANO2002**Nanotechnology 2**

School of Materials Science and Engineering

UOC3 HPW3

This course will concentrate on specific issues relating to the production of nanostructures, nanostructured materials and nanoscale devices. The production of nanostructures will deal with methods for synthesizing and assembling nanostructures, the concept of self-assembly and methods of characterizing their composition and structure. The second and third themes will use contemporary examples to illustrate the unique mechanical and electronic properties of nanoscale materials and devices and their application to, for example, quantum computing.

Note: Available only to students enrolled in program 3617

NANO3003**Nanotechnology 3**

School of Materials Science and Engineering

UOC3 HPW3

This course will concentrate on the evolution of nanodevices from concept to commercialisation. Specific issues dealt with will include approaches to fabrication, engineering or bioengineering aspects, putting the whole device together, commercialization aspects, protection of intellectual property and the raising venture capital.

NANO3410 **Chemistry of Surfaces**

School of Chemistry
UOC3 HPW3

Prerequisite: NANO2002. or approval from the course authority

Vacuum, surface analysis techniques (XPS etc), STM, AFM, surface spectroscopy and solution surface chemistry (micelles, self-assembly, colloids and nanoparticles etc).

NANO3420 **Fabrication of Nanostructured Devices**

School of Materials Science and Engineering
UOC3 HPW2

Material processes used in the fabrication of electronic devices such as single crystal growth, implantation, lithography, etching and thin film growth. Methods of device packaging. Sources of failure and methods of fault diagnosis in devices.

NANO3440 **Biosensors and Biodevices for Nanotechnology**

School of Chemistry
UOC3 HPW3

Prerequisite: NANO2002. or approval from the course authority

Principles of transduction, immobilisation of biomolecules, affinity sensors, catalytic sensors, practical realities of their construction, electrochemical sensors, evanescent wave and other optical sensors.

NANO4004 **Nanotechnology Project**

School of Materials Science and Engineering
UOC18 HPW18

This course requires a major piece of research to be undertaken by students in Stage 4 of the Nanotechnology program 3617.

A range of interdisciplinary projects is offered by contributing schools - Chemistry, Physics, Materials Science and Biochemistry - enabling students to carry out experimental investigations in an area of nanotechnology.

This course is 36 UOC in total: 18 UOC per semester over two semesters.

Note: To be eligible for entry to this course students must be enrolled in program 3617 Nanotechnology, and have successfully completed Stages 1-3.

NAVL3100 **Principles of Ship Design**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3601 or NAVL3603

Development of ships and shipbuilding. The trading environment. The ocean environment. Ship types. Freeboard and load lines. Tonnage. Methods and mathematics of ship design. Estimation of a ship's dimensions, weights, capacity, freeboard, stability, powering and engine selection. Computer-aided representation of hull shape and drawings.

NAVL3110 **Ship Practice**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Corequisite: NAVL3601 or NAVL3603

Ship terminology. Project visits to dockyard, classification society, survey authority, naval architecture consultancy, propeller foundry, container terminal, bulk-cargo facility, naval vessel, cargo vessel, harbour ferry, harbour tug, Australian National Maritime Museum and Sydney Heritage Fleet. Inclining experiment and practical aspects of ship stability and stability criteria. Report writing.

NAVL3400 **Ship Structures 1**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: MATH2009 or MATH2029, MATS9520, MECH2412, MECH3400

Introduction to rationally-based structural design and optimisation. Loading and responses in ship and offshore structures. Bending of the hull girder - linear deterministic approach. Statistical predictions of wave loads and hull girder response. Fatigue strength and minimum required section modulus. Frame analysis and applications in ship structures. Laterally loaded grillages and stiffened panels - elastic analysis. Applications of extended beam theory - hull girder analysis. Properties of different materials such as steel and aluminium in terms of weldability and other methods of joining. Influence of classification rules and other regulations on construction details.

NAVL3603 **Ship Hydromechanics A**

School of Mechanical and Manufacturing Engineering
UOC6 HPW6

Prerequisite: MATH2029, MECH2300, MECH2612

Basic concepts and techniques. Hydrostatic particulars and integration techniques. Coefficients of form. Intact stability. Stability at a small angle. Cross curves of stability. Righting-arm curve. Effect of a free surface. Wall-sided formula. Effect on stability of suspended weights. Watertight subdivision. Flooding. Determination of floodable length. Launching and docking. Computer methods in hydrostatics and stability.

Dimensional analysis applied to problems in Naval Architecture. Conservation of mass, Bernoulli equation, momentum principle. Stream function and potential function. Body generation with a distribution of sources and thin-body approximation. Complex potential, velocity and pressure. Airfoils and hydrofoils.

NAVL3604 **Ship Hydromechanics B**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3603 Corequisite: MECH3330

Plane progressive waves in both deep water and water of finite depth. Rolling and heaving of a ship in calm water. Small angles of roll and nonlinear rolling. Rolling in waves. Heave motion of a spar buoy in waves. Coupled pitching and heaving of a ship in forward motion. Ocean waves and their properties.

NAVL3700 **Ship Propulsion**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3601 or NAVL3603

Propeller and waterjet terminology, theories of action, interaction with the hull, cavitation, propeller, waterjet and engine data, practical details and drawing, strength, estimation of polar moment of inertia and entrained water.

NAVL4101 **Design of High Speed Craft**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3100, NAVL3602 or NAVL3604 Corequisite: NAVL4401

Practical design and layout of modern high-speed vessels. Principal characteristics of monohulls and catamarans in terms of, passenger accommodation, vehicles, and cargo handling. Impact of safety considerations and classification society rules. Hydrodynamics, resistance, propulsion and motions specific to monohulls, catamarans, hydrofoils and hovercraft.

NAVL4102 **Design of Yachts**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3100, NAVL3604 Corequisite: NAVL4402

General arrangement of yachts. Selection of principal dimensions and form coefficients, materials. Influence of rating rules, wind conditions, sea conditions and use of a velocity-prediction program. Hydrodynamics of canoe body, keel and rudder. Aerodynamics of sails and rigging. Scantlings of hull structure, mast and rigging.

NAVL4111 **Ship Design Project A**

School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Prerequisite: NAVL3700 Corequisite: NAVL4101, NAVL4710

Each student is required to perform the following design tasks for a vessel of their choice and submit the results: 1. Rationale, specification, weights, inboard profile. 2. Power, capacities, freeboard, trim, stability, stern gear. 3. Sectional area curve, lines plan, preliminary midship section.

NAVL4112

Ship Design Project B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: NAVL4111 Corequisite: NAVL4102, NAVL4720

Each student is required to perform the following design tasks for a vessel of their choice and submit the results: 4. Hydrostatics, stability and subdivision analysis. 5. Powering, propeller, systems - schematic drawing, detailed capacities. 6. Section modulus calculation, bulkhead, midship section, module concept. 7. Final weights, capacity drawing, operational data and evaluation. 8. Specification.

NAVL4401

Ship Structures 2A

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: NAVL3400, MECH3400 Excluded: AERO4401, AERO9415, MECH9410

Application of MSC/PATRAN and MSC/NASTRAN to structural analysis. Structural modelling, mesh generation, resources required for solution, evaluation of results. Applications to analysis of practical structures including structural vibrations and prediction of stiffness and ultimate strength.

NAVL4402

Ship Structures 2B

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: NAVL4401

Composite materials - laminate theory, failure modes, design criteria, durability and manufacturing practices for composite structures. Fatigue - fatigue of welded structures including S-N approach and fracture mechanics. Prediction of life, crack growth and inspection and maintenance requirements.

NAVL4710

Ship Standards

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: NAVL3602 or NAVL3604

Documentation, tendering and contract administration. Aspects of special craft. Construction materials and their advantages and disadvantages. Use of the USL Code. Resistance components including frictional, residuary, appendage and air, and methods of prediction.

NAVL4720

Marine Engineering

School of Mechanical and Manufacturing Engineering

UOC3 HPW3

Prerequisite: NAVL3602 or NAVL3604

Steam, diesel, gas turbine, electric and nuclear propulsion. Systems for power transmission, fuel supply, electricity generation, pumping and piping, compressors, purifiers, automation and life-saving. Ship manoeuvring and control. Design of rudders and steering gear.

OBST5001

Obstetrics and Gynaecology

School of Women's and Children's Health

UOC10

Prerequisite: MDSC4001

Objectives: To be able to take a history and perform a physical examination relevant to the female reproductive system; to recognise common disorders of the female reproductive system; to manage common medical gynaecological disorders likely to be encountered in primary care practice; to provide antenatal and postnatal care for normal women and to recognise deviations from normal; to be able to provide emergency care when indicated and to know the indications for referral. The program consists of tutorials in core subjects, clinical, physiological and pathological conferences and simulated patient management problem exercises. Students are taught in small tutorial groups. Supervised clinical experience is gained in outpatient clinics, inpatient services and the labour wards of The Royal Hospital for Women, St George, Bankstown, and

Liverpool hospitals. Some undergraduates currently spend six months in the hospitals in Wagga Wagga and Albury in a combined Paediatric/Obstetrics & Gynaecology term. From 2004, hospitals in Coffs Harbour & Port Macquarie will provide teaching for students who will spend the whole nine week term at the School of Rural Health sites. Neonatal paediatric experience is integrated with the teaching of Obstetrics and Gynaecology. Full details are described in a booklet published by the School. Assessment: Continuing evaluation of clinical work, a multiple choice examination and an objective, structured clinical examination in the last week of term.

OPTM1105

Optics and the Eye 1

School of Optometry and Vision Science

UOC8 HPW8

Objectives: Understanding of physical and geometrical optics, the eye and ametropia, the measurement of optical radiation preliminary to ocular hazard assessment, colour measurement and specification and lighting design.

Brief Curriculum: Geometrical optics; rectilinear propagation of light, reflection and refraction at plane and spherical surfaces, prisms, thin lenses, simple magnifiers, compound magnifiers, stops, pupils and windows.

Physical optics: Wave nature of light, superposition of waves, interference, diffraction, polarisation. The eye and ametropia: Models of the eye, spherical refractive errors of the eye and their correction with lenses. Measurement of light and colour: Sources of optical radiation, sunlight and daylight, detectors, the eye as a detector, principles and practise of photometry, principles and practise of colour measurement and specification, uniform colour scales, colour rendering, metamerism, colour atlases and order systems.

OPTM1201

Ocular and Visual Science 1

School of Optometry and Vision Science

UOC4 HPW4

Prerequisite: OPTM1105, BIOS1401

Objectives: An understanding of the anatomy and physiology of the eye (particularly the anterior eye), the adnexa and visual system, and detailed information on some aspects of vision that form the foundation of Clinical Optometry. These subjects are studied in greater depth in later years.

Brief Curriculum: Introduction to the gross anatomy of the eye, orbit and adnexa; the microscopic anatomy of the cornea, lens, uvea, eyelids, lacrimal apparatus and retina. The physiology of the cornea, of tear and aqueous production, along with the physiology of the crystalline lens, are also covered.

OPTM1202

Clinical Optometry 1

School of Optometry and Vision Science

UOC6 HPW6

Objectives: Familiarity with basic clinical optometric goals, skills and techniques.

Brief Curriculum: role of the optometrist, history of optometry, verbal and written communication in optometry, practice structure and organisation, clinical measurement of visual function including vision and visual acuity, colour vision, binocular vision and visual fields, examination of the internal and external eye (including biomicroscopy), and introduction to soft and rigid contact lenses. Dispensing: introduction to frames, lenses and the fabrication of optical appliances.

OPTM1205

Optics and the Eye 2

School of Optometry and Vision Science

UOC4 HPW4

Prerequisite: OPTM1105, PHYS1199; Corequisite: OPTM1201

Objectives: Understanding of the optics of the eye and visual performance, measurement and correction of refractive errors, spectacle lenses and their subsidiary effects.

Brief Curriculum: Optics of the measurement and correction of the errors of refraction of the eye, accommodation, retinal image analysis, visual acuity, contrast sensitivity, modulation transfer function, limits to visual resolution, higher order aberrations of the eye, astigmatism, near correction, subjective refraction, ocular correction of ametropia (contact and implant lenses), spectacle magnification and prismatic effects, entoptic phenomena.

OPTM1207**Foundations of Hygiene & Infectious Disease in Optometric Practice**

School of Optometry and Vision Science

UOC4 HPW4

Prerequisite: BIOS1401, CHEM1819 Corequisite: CHEM1829

Objectives: An understanding of basic microbiology applied to optometric practice.

Brief Curriculum: Biology, metabolism and genetics of microbes. Theory of infection and disease propagation. Antibiotics and bacteria. Immunology: Basics, T-cell types and functions, immunoglobulins, cell-mediated immunity, hypersensitivity, auto-immune disease and ocular inflammation. Outline of disease-causing bacteria. Detailed examination of common ocular pathogens. Contact lens related disease and microbiology. Eukaryotic pathogens.

OPTM2101**Ocular and Visual Science 2A**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM1201, CHEM1829 Corequisite: PHPH2121

Objectives: Understanding of the anatomical, physiological and psychophysical fundamentals of visual perception, as they underlie the practice of modern clinical optometry.

Brief Curriculum: Review of classical ideas on the nature of visual perception: light, colour, space, time and classical psychophysics. Anatomy of the skull and orbit, brain, and retina. Structure and function of retinal photoreceptors. Retinal circuits. Eye movements and their control mechanisms.

OPTM2102**Clinical Optometry 2A**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM1201, OPTM1202, OPTM1205 Corequisite: OPTM2101, OPTM2105

Objectives: An analysis of the primary care optometric consultation. The development of good communication skills. Appreciation of the breadth of presentation of normal vision and ocular status. Acquisition of technical skills to carry out an evaluation of the health of the ocular and visual system and of refractive status with a view to prescribing spectacles for the uncomplicated patient.

Brief Curriculum: Ocular health: history and symptoms, introduction to diagnostic drugs, slit lamp biomicroscopy, tonometry, direct ophthalmoscopy, external eye examination. Ametropia: aetiology and management of refractive errors, objective and subjective refraction, cycloplegic refraction and prescribing lenses, special populations.

OPTM2105**Optics and the Eye 3**

School of Optometry and Vision Science

UOC3 HPW3

Prerequisite: OPTM1202, OPTM1205 Corequisite: OPTM2101.

Objectives: Understanding the optics of ophthalmic instruments and clinical applications. Understanding the optics of the devices and components of refraction. Understanding the subsidiary effects and the basic design principles of ophthalmic lenses. Understanding the aberrations of the human eye.

Brief Curriculum: Ophthalmic instruments and clinical applications: direct ophthalmoscope, indirect ophthalmoscope, retinoscope, keratometry, the radiuscope, tonometry, pachometry, projectors, bio-microscopy, stereoscopy, low vision aids, devices and components of refraction: optometers (subjective/objective), Stokes lens, Scheiner disc. astigmatic decomposition, photorefracton and remote refraction. Ophthalmic lenses: near astigmatism, horizontal and vertical prismatic effects, anisometropia, aberrations, (oblique astigmatism, curvature error, distortion & chromatic aberration), best form lenses, and design of contact lenses. Aberrations of the eye; measurement and correction of the monochromatic wave aberrations of the eye.

OPTM2111**Optometry 2A**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: VISN1211, VISN1231; Corequisites: VISN2111, VISN2131, PHPH2101

Objectives: Acquisition of the technical skills needed to refract and assess the ocular health of an uncomplicated normal patient; development of clinical synthesis and problem solving abilities.

Brief Curriculum: Ocular health: history and symptoms, introduction to diagnostic drugs; Ametropia: measurement of visual acuity, aetiology and management of refractive error, objective and subjective refraction, retinoscopy, cycloplegic refraction, prescribing and dispensing prescription lenses, clinical aspects of lens design, special populations; Clinical skills: problem based consultations, interviewing skills, clinical decision making, case analysis.

OPTM2201**Ocular and Visual Science 2B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM2101, OPTM2102 Corequisite: PHPH2221.

Objectives: To develop an understanding of the structure and function of the human visual system, in adults and during development. Brief

Curriculum: The structure and function of the visual pathway from the optic nerve to visual areas of the cerebral cortex. Basic embryology, and the normal and abnormal development of the visual pathway, from eye to brain. The assessment of visual function using electrophysiological techniques. The assessment of visual function in non-verbal patients, using psychophysical techniques. The neural basis of binocular vision: the way in which the human visual system assesses relative depth of objects within the visual scene.

OPTM2202**Clinical Optometry 2B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM2101, OPTM2102, OPTM2105 Corequisite: OPTM2201, OPTM2206

Objectives: To build on OPTM2102 in equipping the student to be professional in manner with good communication and technical skills and able to carry out a logically sequenced primary care evaluation of the health of the ocular and visual system, refractive status and binocular coordination with a view to prescribing spectacles for the uncomplicated patient.

Brief Curriculum: Interviewing skills. Ocular health: biomicroscopy, tonometry, ophthalmoscopy. Ametropia: objective and subjective refraction. Binocular vision: sensory and motor aspects of binocular vision, introduction to binocular vision anomalies, accommodation/convergence imbalances.

OPTM2206**Pathology for Optometry**

School of Optometry and Vision Science

UOC3 HPW3

Prerequisite: OPTM1207, OPTM2102

Objectives: A basic understanding of general and systemic pathophysiology. Brief Curriculum: Cell injury and adaptation, pathogenesis of cell injury, inflammation, edema, thrombosis, embolism, arteriosclerosis, neoplasia, environmental disease, diabetes, hypertension, myocardial infarction, intracranial pathology, cerebral disease. Practical examples of ocular disease shall be discussed.

OPTM2211**Optometry 2B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: VISN2111, VISN2131, OPTM2111; Corequisites: VISN2211, VISN2231, PHPH2201

Objectives: To build on Optometry 2A in equipping students with the technical skills needed to assess the ocular health of an uncomplicated patient.

Brief Curriculum: the normal fundus, direct and indirect ophthalmoscopy, slit lamp biomicroscopy, fundus lenses, tonometry, gonioscopy, ophthalmic projectors, visual field assessment, colour vision assessment, external eye examination.

OPTM3102**Clinical Optometry 3A**

School of Optometry and Vision Science

UOC12 HPW12

Prerequisite: OPTM2201, OPTM2202, OPTM2206; Corequisite: OPTM3108, PSYC3516.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision of a registered optometrist. To advance student knowledge in dispensing, refraction, colour vision, ocular health assessment, paediatric vision and contact lenses. To advance student abilities in case analysis by integrating all aspects of optometry. To stimulate students' interest in optometric subspecialties such as colour vision, paediatric vision care and contact lenses.

Brief Curriculum: Lectures, tutorials and practical classes will deal with: refraction - practical aspects; contact lenses - soft and rigid contact lens design and manufacture, fitting techniques and evaluation, care and maintenance of contact lenses; paediatric optometry - child development and role of vision, behavioural optometry, visual perceptual dysfunction and learning difficulties, contact lenses and special needs children; dispensing - practical aspects; advanced ocular assessment - colour vision, visual fields and other techniques of assessing ocular and visual function.

OPTM3108

Ocular Disease

School of Optometry and Vision Science
UOC6 HPW6

Prerequisite: OPTM2202, OPTM2206

Objectives: to introduce the diagnosis and optometric management of diseases of the anterior and the posterior eye and visual system. Brief curriculum: diseases of the lids, conjunctiva, lacrimal system, sclera, cornea, vitreous body, crystalline lens, uvea, retina, optic nerve, pupils, cranial nerves and visual pathway. Glaucoma, diplopia, effects of systemic disease and ocular trauma will also be discussed.

OPTM3111

Optometry 3A

School of Optometry and Vision Science
UOC6 HPW6

Prerequisites: VISN2211, VISN2231, OPTM2211; Corequisites: VISN3111, OPTM3131

Objectives: To produce a student with a professional attitude and good communication skills who can integrate scientific and clinical aspects of optometry. To advance student knowledge and stimulate interest in dispensing, contact lenses and binocular vision.

Brief Curriculum: Dispensing: lens types, tints, ophthalmic prism, lens materials, neutralising lenses, interpreting a prescription, selecting spectacles frames, patient management, case studies; Contact lenses: terminology, lens design, contact lens biophysics, rigid lenses, soft lenses, optics of contact lenses, lens care, fitting children; Binocular vision: interviewing, ocular motility, accommodation, vergence eye movements, heterophoria measurement, the stereoscope, graphical analysis, case analysis.

OPTM3131

Ocular Disease 3A

School of Optometry and Vision Science
UOC6 HPW6

Prerequisite: VISN2231, OPTM2211, PHPH2201; Corequisites: VISN3111, OPTM3111

Objectives: To introduce students to the diagnosis and optometric management of diseases of the anterior eye.

Brief Curriculum: Diseases of the eyelids, ocular adnexa, conjunctiva, lacrimal system, cornea, vitreous body and lens; Case analysis.

OPTM3203

Clinical Optometry 3B

School of Optometry and Vision Science
UOC3 HPW3

Prerequisite: OPTM3102, OPTM3108, PSYC3516; Corequisite: OPTM3209, PHPH3302.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision of a registered optometrist. To advance student abilities in case analysis by integrating all aspects of optometry. Brief Curriculum: Students will examine patients in the Optometry Clinic and satellite clinics and participate in tutorials.

OPTM3204

Clinical Optometry 3C

School of Optometry and Vision Science
UOC8 HPW8

Prerequisite: OPTM3102, OPTM3108, PSYC3516; Corequisite: OPTM3203, OPTM3209, PHPH3302.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision of a registered optometrist. To advance student knowledge in and to stimulate students' interest in optometric subspecialties such as low vision, binocular vision and contact lenses. Brief Curriculum: Lectures, tutorials, and practical classes will deal with : contact lenses - complications, clinical management, special applications and advanced topics; binocular vision - case analysis, diagnosis and management of strabismus and amblyopia, aniseikonia and related topics; low vision rehabilitation - epidemiology of visual impairment, the low vision examination, survey of current low vision aids, adaptive technology, the multidisciplinary model.

OPTM3209

Environmental Optometry

School of Optometry and Vision Science
UOC6 HPW6

Prerequisite: OPTM2202, OPTM3102.

Objectives: to understand the impact of environmental factors on the eye, and the optometrical management of environmentally produced ocular and visual problems. Brief Curriculum: optometrical aspects of occupational health and safety. Eye hazards, eye protection, ocular first-aid, ocular and visual factors in the workplace, visual ergonomics, visual standards, vision screening, lighting design, epidemiology of occupational eye disease. Handling of clinical and occupational data. Occupational health and safety law. Case studies: visual aspects of driving and aviation. The screen-based equipment user.

OPTM3211

Optometry 3B

School of Optometry and Vision Science
UOC6 HPW6

Objectives: To build on OPTM3103 and to advance student knowledge and stimulate interest in primary care optometry, contact lenses and binocular vision.

Brief Curriculum: Primary care: clinical laboratories that practice clinical skills in the assessment of normal subjects; Contact lenses: corneal physiology relating to contact lens wear, advanced contact lens fitting, management of the contact lens patient; Binocular vision: assessment of strabismus, amblyopia and anomalous correspondence, AC/A ratio, correspondence and fusion, fixation disparity, stereopsis, control systems analysis; Management of anomalies; Case analysis.

OPTM3231

Ocular Disease 3B

School of Optometry and Vision Science
UOC6 HPW6

Prerequisite: OPTM3131; Corequisite: OPTM3211

Objectives: To introduce students to the diagnosis and optometric management of diseases of the posterior eye and visual system.

Brief Curriculum: Diseases of the uvea, retina, optic nerve, pupils, cranial nerves and visual pathway. Glaucoma, diplopia and the effects of systemic disease are also discussed; Case analysis.

OPTM4110

Optometry 4A

School of Optometry and Vision Science
UOC3 HPW3

Prerequisites: OPTM3211, OPTM3231, VISN3211; Corequisites: OPTM4131, OPTM4151, OPTM4170

Objectives: To build on OPTM3211 and to advance student knowledge and stimulate interest in children's vision, vision therapy, and low vision.

Brief Curriculum: Children's vision: history taking, the development of the child and vision; Vision therapy: vision and posture, behavioural optometry, learning difficulties, special needs, child abuse; Low vision: epidemiology, adaptation to loss, the low vision assessment, magnification, optical low vision aids, non-optical low vision aids, adaptive technology, multi-disciplinary models, international issues.

OPTM4114**Optometry and the Professional Environment A**

School of Optometry and Vision Science

UOC3 HPW3

Corequisite: OPTM4311, OPTM4312, OPTM4313

Objectives: To make optometry students aware of the purposes and consequences of their education, to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists. Brief Curriculum: Optometry's role in health care. Morals and ethics. The law and optometry. Accounting and taxation. Marketing. Harassment and discrimination in the consulting room. Dealing with change. Optometric business dynamics. Indigenous eye care. Co-management.

OPTM4131**Clinical Optometry 4A**

School of Optometry and Vision Science

UOC6 HPW6

Objectives: To develop the clinical skills from earlier courses to competently examine patients; to appropriately recommend treatment and strategies for patients presenting for primary eye care at the UNSW Optometry Clinic and at satellite clinics.

Brief Curriculum: Clinical experience in primary eye care: diagnosis, management and treatment of these patients are emphasised; case history; communications skills; refraction; ocular health assessment; binocular vision status; synthesis of clinical data; development of a clinical management plan; record-keeping; dispensing of ophthalmic prescriptions; continuing care.

OPTM4151**Ocular Therapeutics 4A**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: PHPH3302, OPTM3231; Corequisite: OPTM4131

Objectives: To provide an in-depth understanding of the management of anterior segment eye disease and the role of the optometrist in this process.

Brief Curriculum: The scope of the course includes diseases of the lids and lacrimal system, ocular surface, anterior chamber, uvea, crystalline lens, cornea and vitreous body; refractive surgery; epidemiology and clinical trials of anterior eye disease; differential diagnosis; new diagnostic tools e.g. Corneal topography, impression cytology, PCR, confocal microscopy, ultrasound biomicroscope, tear analysis, corneal aesthesiometry; management strategies to include both current and future therapeutic approaches, influence of therapy on disease course, iatrogenic disease and ocular manifestations of systemic diseases; management of chronic disease, referral criteria and surgical management.

OPTM4170**Professional Optometry 4A**

School of Optometry and Vision Science

UOC3 HPW3

Corequisite: OPTM4131

Objectives: To make optometry students aware of the purposes and consequences of their education; to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists.

Brief Curriculum: Optometry's role in health care; morals and ethics; the law and optometry; accounting and taxation; marketing; harassment and discrimination in the consulting room; dealing with change; optometric business dynamics; Indigenous eye care; co-management of eye disease.

OPTM4210**Research Project**

School of Optometry and Vision Science

UOC3 HPW3

Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PHPH3302

Objectives: This subject seeks to develop students' skills in searching the literature, critical analysis of publications, developing hypotheses, designing and running experiments, statistical data analysis and oral and written presentation of reports. Students in groups of 2 to 4 carry out a small research project under the guidance of an academic staff member. In November each group makes a presentation to a symposium.

OPTM4211**Optometry 4B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: OPTM4110, OPTM4131, OPTM4151, PSYC3516;

Corequisites: OPTM4231, OPTM4251, OPTM4270

Objectives: To build on OPTM4110 and to advance student knowledge and stimulate interest in environmental optometry, binocular vision and contact lenses.

Brief Curriculum: Environmental optometry: safety in industry, eye hazards, ergonomics, visual fatigue, lighting design, task analysis, public health, occupational health and safety law, visual screening, case analysis; Binocular vision: amblyopia, non-concomitant strabismus, neurological palsies, myogenic palsies, alphabet palsies, aniseikonia, nystagmus, use of botulinum toxin therapy; Contact lenses: orthokeratology, the Asian eye, presbyopia, keratoconus, special applications, silicone lenses, future developments.

OPTM4214**Optometry and the Professional Environment B**

School of Optometry and Vision Science

UOC3 HPW3

Prerequisite: OPTM4114 Corequisite: OPTM4311, OPTM4312, OPTM4313

Objectives: to make optometry students aware of the purposes and consequences of their education, to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists. Brief Curriculum: History of optometry and optics. Legal aspects of optometry. Medicare. State law and how it affects optometry. Starting an optometric practice. Modes of practice. Practice information systems. Computers and optometry. Continuing education. Challenges in optometry.

OPTM4231**Clinical Optometry 4B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: OPTM4110, OPTM4131, OPTM4151, OPTM4170;

Corequisites: OPTM4211, OPTM4251, OPTM4270, MEDM8001

Objectives: To develop the clinical skills from OPTM4131 with direct patient primary eye care consultations. More specialised optometric assessment techniques are acquired in authentic learning environments.

Brief Curriculum: Continuing clinical experience in primary eye care - diagnosis, management and treatment of patients is emphasised; use of more specialised clinical diagnostic tools in the management of patients with ocular disease; referral criteria; inter-professional referral and co-management.

OPTM4251**Ocular Therapeutics 4B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM4151; Corequisite: OPTM4231

Objectives: To provide an in-depth understanding of the management of posterior eye disease and the role of the optometrist in this process.

Brief Curriculum: The scope of the course includes diseases of the vitreous body, uvea, retina, optic nerve and visual pathway - Glaucoma, macular degeneration and diabetic retinopathy will be discussed in detail; new diagnostic tools and interpretation of results, including scanning laser topography, scanning laser polarimetry, angiography, optical coherence tomography, reflectometry, retinal blood flow analysis; management therapies to include both current and future therapeutic approaches, influence of therapy on disease course, iatrogenic disease and ocular manifestations of systemic diseases; management of chronic disease, referral criteria and surgical management; script writing, record keeping, liaising with other health care professionals; Legal framework and obligations, ethics, co-management.

OPTM4270**Professional Optometry 4B**

School of Optometry and Vision Science

UOC3 HPW3

Prerequisite: OPTM4170; Corequisite: OPTM4231

Objectives: To make optometry students aware of the purposes and consequences of their education; to develop an awareness of professional

and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists.

Brief Curriculum: History of optometry and optics; legal aspects of optometry; Medicare; state law and how it affects optometry; starting an optometric practice; modes of practice; practice information systems; computers and optometry; continuing education; new challenges in optometry.

OPTM4311

Clinical Optometry 4A

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. **Brief Curriculum:** Clinical experience in primary eye care. Diagnosis, management and treatment of these patients will be emphasised.

OPTM4312

Clinical Optometry 4B

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. **Brief Curriculum:** Clinical experience in the following areas; colour vision, low vision, ocular disease and participation in patient review clinics. Diagnosis, management and treatment of these patients will be emphasised.

OPTM4313

Clinical Optometry 4C

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. **Brief Curriculum:** clinical experience in the following areas; contact lenses, dispensing, vision training, sports vision and paediatric clinics. Diagnosis, management and treatment of these patients will be emphasised.

OPTM5111

Clinical Optometry 5A

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: OPTM4211, OPTM4231, OPTM4251, OPTM4270; Corequisites: PSYC3516, PHPH3302

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for primary eye care.

Brief Curriculum: A minimum of 100 hours of clinical experience in primary eye care. Emphasis is on diagnosis, management and treatment of these patients.

OPTM5131

Specialist Clinical Optometry 5A

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: OPTM4211, OPTM4231, OPTM4251

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for eyecare.

Brief Curriculum: A minimum of 100 hours of supervised clinical experience in the following advanced areas: contact lenses, vision training, dispensing, paediatric clinics, low vision and colour vision.

OPTM5151

Clinical Ocular Therapeutics 5A

School of Optometry and Vision Science

UOC6 HPW6

Prerequisites: OPTM4231, OPTM4251, VISN2231, PHPH3302

Objectives: Further development of the clinical skills needed to competently examine patients with ocular disease, and recommend appropriate treatment and strategies for patients presenting with ocular disease.

Brief Curriculum: A minimum of 72 hours of clinical work related to ocular disease management - students are rostered to attend speciality clinics at the Optometry Clinic at UNSW and at external clinics; detailed clinical and therapeutic management of ocular disease conditions, observation and supervised management of clinical cases, co-management of patients with ophthalmology and general practice.

OPTM5171

Research Project 5A

School of Optometry and Vision Science

UOC6 HPW6

Objectives: Modern optometrists need to be able to understand clinical research. This course introduces students to research and the scientific method.

Brief Curriculum: The literature review, critical analysis of literature, developing a hypothesis, experimental design, ethical considerations, the research process. Seminars from current researchers demonstrate the research process and current research directions in optometry and vision science. Students work in small groups to develop a realistic research proposal.

OPTM5211

Clinical Optometry 5B

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM5111

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for primary eye care.

Brief Curriculum: A minimum of 100 hours clinical experience in primary eye care. Emphasis is on diagnosis, management and treatment of these patients.

OPTM5231

Specialist Clinical Optometry 5B

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM5131

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for eyecare.

Brief Curriculum: A minimum of 100 hours of supervised clinical experience in the following advanced areas: contact lenses, vision training, dispensing, paediatric clinics, low vision and colour vision.

OPTM5251

Clinical Ocular Therapeutics 5B

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM5151

Objectives: Further development of the clinical skills needed to competently examine patients with ocular disease, and recommend appropriate treatment and strategies for patients presenting with ocular disease.

Brief Curriculum: A minimum of 72 hours of clinical work related to ocular disease management - students are rostered to attend speciality clinics at the Optometry Clinic at UNSW and at external clinics; detailed clinical and therapeutic management of ocular disease conditions, observation and supervised management of clinical cases, co-management of patients with ophthalmology and general practice.

OPTM5271

Research Project 5B

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: OPTM5171

Objectives: This course continues to develop the skills learnt in OPTM5171. Students assemble the required materials, subjects and equipment and conduct the experiment they proposed in OPTM5171. The data is analysed using the appropriate statistical methods, and a publication-quality written report submitted. Each group is also required

to present the results of their research at the annual student research symposium.

PAED5101

Paediatrics

School of Women's and Children's Health

UOC10

Prerequisite: MDSG4001

Objectives: To understand the physical, intellectual, and emotional development of children; to recognise important interactions between the child, the family and the community; to take a reliable medical history from children and parents/guardians; to perform a reliable physical examination; to communicate with children and parents/guardians; to recognise acutely ill children and initiate management; to recognise and initiate management of common paediatric disorders; to recognise the role of preventative care in child health; to recognise the roles of allied health care professionals. General Paediatrics and Paediatric Surgery are taught at the Sydney Children's Hospital (5 weeks) and Associated Hospitals including rural locations (4 weeks). Clinical clerking and practical involvement in care of inpatients are emphasised. Seminars and lectures on core material, case conferences, and instruction in clinical skills are provided. Students are expected to spend one night in four and one or two weekends per term in residence. Neonatal medicine is integrated with teaching of obstetrics and gynaecology. Assessment: Progressive assessment from clinical supervisors through the term, multiple choice, objective structured clinical assessments and clinical examinations in the last week of term.

PATH0005

Pathology Honours Full-time

School of Medical Sciences

UOC24

Research component of thesis: basic mechanisms of human disease processes, including inflammation, rheumatoid arthritis, asthma, uvetis, infection, bone and biomaterials, tumour biology, vascular biology, atherosclerosis and genetics. Projects can include techniques such as tissue culture and cell biology, microbiology and genetics, protein chemistry, histology and microscopy, immunology and enzymology. Projects may be undertaken within the School of Pathology or at a laboratory of an affiliated institute or hospital department associated with the school.

PATH0006

Pathology Honours Part-time

School of Medical Sciences

UOC12

Research component of thesis: basic mechanisms of human disease processes, including inflammation, rheumatoid arthritis, asthma, uvetis, infection, bone and biomaterials, tumour biology, vascular biology, atherosclerosis and genetics. Projects can include techniques such as tissue culture and cell biology, microbiology and genetics, protein chemistry, histology and microscopy, immunology and enzymology. Projects may be undertaken within the School of Pathology or at a laboratory of an affiliated institute or hospital department associated with the school.

PATH2201

Processes in Disease

School of Medical Sciences

UOC6 HPW4

Prerequisite: ANAT2241 or ANAT1510, plus any one of ANAT2111, PPHP2101, BIOC2101/BIOC2181.

Lectures, tutorials and museum study sessions aimed at increasing understanding of important disease processes. Comparisons between normal and abnormal cell, tissue and organ function will be made. Includes processes of cell and tissue degeneration, acute and chronic inflammation, regeneration and repair, infection, atherosclerosis, thrombosis, embolism and infarction. Particular examples include diseases of practical importance such as pneumonia, tuberculosis, pulmonary embolism and myocardial infarction. Aberrations of cell growth introduces neoplasia with examples of common tumours.

PATH3205

Molecular Basis of Disease A

School of Medical Sciences

UOC6 HPW4

Prerequisite: PATH2201

Recent advances in understanding molecular mechanisms of acute and chronic inflammation, allergy, autoimmune diseases, atherosclerosis and thrombosis. Detailed discussion of mediators of these processes, including cytokines and growth factors. Systemic pathology of the cardiovascular and respiratory systems, with an emphasis on ischaemic heart disease and asthma. Laboratory classes introduce modern research and diagnostic techniques.

Note: Students are advised that previous and concurrent study of Anatomy, Physiology, Biochemistry or Immunology would be an advantage.

PATH3206

Molecular Basis of Disease B

School of Medical Sciences

UOC6 HPW4

Prerequisite: PATH3205

Recent advances in understanding the pathogenetic mechanisms underlying congenital disorders and neoplasia. Detailed discussion of molecular carcinogenesis, the metastatic process and techniques for diagnosing congenital diseases. Common tumours, with an emphasis on colorectal, breast, prostate and cervical carcinoma. Systemic pathology of the gastrointestinal, genitourinary and central nervous systems including peptic ulcer disease, liver disorders, glomerulonephritis, and Alzheimer disease.

Note: Advantage in having undertaken previous study in ANAT3231 Cell Biology.

PATH3207

Musculoskeletal Diseases

School of Medical Sciences

UOC6 HPW4

Prerequisite: PATH2201, ANAT2111 or ANAT2511

Current scientific concepts of musculoskeletal diseases including arthritis, metabolic bone disease, primary and secondary bone neoplasms and neuromuscular disease. Detailed coverage of fracture healing and its complications and of biomaterials and prosthetic devices relevant to orthopaedic applications.

PECO1000

Introduction to Political Economy

School of Social Science and Policy

UOC6 HPW3

Introduces the main schools of thought in political economy. Covers the development of economic ideas since Adam Smith and the key debates that have engaged the study of political economy.

PECO1001

Australia in the Global Economy

School of Social Science and Policy

UOC6 HPW3

Excluded: ECOH1301, ECON1301

Looks at the international economy at the end of the 19th century (trade, factor flows, and payments arrangements); problems of the international economy between the wars; the impact of World War II and the international economy in the post-war era; and Australian economic development and its relationship with the international economy in terms of economic fluctuations, problems of the inter-war period, growth of manufacturing, government policy and action, the importance of the mining industry, economic development and the distribution of income and wealth.

PECO2000

Political Economy and the State

School of Social Science and Policy

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SLSP2000

An interdisciplinary overview of the making of economic policy and the institutional structure in which it occurs. Considers how theory informs and legitimates policy choices and how policies are dependent on historical, social and economic contexts. Major current policy case studies are used to evaluate policy implementation in Australia and internationally.

PECO3000

Political Economy

School of Social Science and Policy

UOC6 HPW3

Prerequisite: PECO2000 or SLSP2000; Excluded: ECON3119

Examines alternative paradigms in economics and may include schools of thought such as the Post Keynesians, New Institutionalists, Marxians or Austrians. Particular non-traditional approaches to the theory of the firm and such topics as experimental economics, Cambridge distribution and growth theory, economic sociology, economics of politics and the debate over economic rationalism may be covered. Specific topics will depend on student preferences.

PHIL1007

Knowledge and Reality

School of Philosophy

UOC6 HPW3

An introduction to some classical and contemporary philosophical questions, puzzles, and ideas about knowledge and reality. This is a course in two central areas of philosophy - epistemology and metaphysics. Philosophers could include Plato, Descartes, Berkeley, and Hume, along with many contemporary philosophers. Topics may include: (1) Metaphysics: personal identity, free will, good and evil, universals, essences, meaning of life, death; (2) Epistemology: fallibility, truth, evidence, knowledge, empiricism, causation, rationalism, knowledge of other minds, knowledge of the external world, idealism, moral knowledge.

PHIL1008

Ethics and Society

School of Philosophy

UOC6 HPW3

This is political philosophy and moral philosophy at the intersection of the political with the personal. When we make decisions in important areas such as euthanasia, reproductive freedom and reproductive technology, the allocation of health resources or the environment, we must balance the rights and duties of the individual with the demands and obligations of society. This team-taught course considers the moral issues raised by such decisions, along with some of the political, philosophical principles which inform our public debate. Also examines the nature and justification of rights, as well as contemporary concepts of justice and equality.

PHIL1010

Thinking About Reasoning

School of Philosophy

UOC6 HPW3

Excluded: GENT0604

Thinking clearly, reasoning productively, arguing well. These are skills essential in life in general and at University in particular. Philosophy has a lot to say about these practices, and also about the whole nature of human reason. Involves practical work on reasoning and argumentative strategies, and an introductory investigation into what good reasoning actually is. There is a great deal of modern philosophical investigation into these matters.

PHIL1014

Introduction to European Philosophy

School of Philosophy

UOC6 HPW3

Provides a broad introduction to themes in European Philosophy, such as: the character of human subjectivity, rationality (and its limits), alienation, progress, history, freedom and how to understand meaning and morality with the waning of religious authority. Focuses on the legacy of the Enlightenment (Rousseau, Kant), the principal critics of this tradition (Hegel, Marx and Nietzsche), the emergence of existential and phenomenological themes in the work of thinkers such as Heidegger; some of the influential sources of contemporary theory such as the Frankfurt School and Hannah Arendt, and mostmodern thinkers such as Foucault.

PHIL2001

Logic

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: MATH3400, PHIL2106

This course is about deductive logic (in particular, propositional logic and predicate logic). Aims to construct - and to understand - a precise, unambiguous, formal language. Many important parts of English are translatable into it, hence many arguments of English are translated into it too. It is a language with which we can better understand the concept of deductive proof.

PHIL2002

Ways of Reasoning

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: PHIL2108

Examines what reasoning and argument really are and how best to engage in them. Material for this course is drawn from everyday sources, such as newspapers, books and advertisements, including television, as well as some of the brilliant pieces of reasoning in the philosophical tradition. From studying the structure of arguments, the purpose of reasoning, and a number of strong and weak argumentative moves, and from a guided re-evaluation of their own writing, students will be able to improve their critical skills and the presentation of their own arguments.

PHIL2005

20th Century European Philosophy

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: PHIL2407

Examines the main themes and thinkers of 20th Century French and German philosophy that have influenced the way we think about the world, our place in the world, and our relations with each other. Explores and compares important French and German approaches to issues such as language and meaning; existence and being; knowledge and interpretation; time and death; intersubjectivity and difference. Issues will be explored through an examination of the writings of major figures in French philosophy such as Merleau-Ponty, Foucault, Irigaray, Deleuze, and Derrida, and in German philosophy such as Arendt, Gadamer, Habermas and Heidegger.

PHIL2008

Issues in Applied Ethics

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Introduces various problems in the field of Applied Ethics within bioethics, environmental, business, political and public ethics. Provides an introduction to the key theories used in applied ethics, and considers how such theories help in making ethical judgments about the problems encountered in various areas of contemporary life. Issues to be discussed include: genetic technology, euthanasia, terrorism, political corruption and dirty hands, corporate responsibility and our responsibilities to animals and the environment.

PHIL2020

Philosophy of Language

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit

An introduction to central ideas in understanding what language is and how it works. Questions addressed include: What abilities are required of language users? How can language be used to refer to the world? What is the relation between language and thought? What is meaning? How are language and community related? What are speech acts?

PHIL2109

Contemporary Metaphysics

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines several classic metaphysical questions some of which are as follows: Is there a real world? What is social reality? What is the nature of possibility? Is this the only possible world? Is there a God? Are there people? Is there free will?

PHIL2206

Philosophy of Mind

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

An introduction to some central concerns and major debates about the nature of mind. Addresses questions such as can our conscious mental life be an object of scientific study? What is the relation between mind

and brain? Can we explain how consciousness evolved? What is the basis and nature of our personal identity?

PHIL2207

Philosophy of Psychology

School of Philosophy

UOC6 HPW3

Prerequisite: 6 level 1 units of credit in Philosophy or PSYC1001 or PSYC1011 and 36 units of credit overall

Philosophical issues in theoretical psychology, drawn from philosophical and psychological writings on mind, brain and behaviour; consciousness, memory and self; perception; and psychology and brain science.

PHIL2208

Contemporary Epistemology

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall. Excluded: PHIL2209

What is knowledge? What knowledge are people capable of having? Might people have no knowledge at all? Might people at least have much less knowledge than they take themselves to have? We will discuss sceptical, as well as non-sceptical, philosophical theories of knowledge, covering such topics as these: truth, fallibility, evidence, certainty, knowledge of the world, knowledge of the unobserved, knowledge of one's mind, knowledge of meaning.

PHIL2218

Philosophical Foundations of Artificial Intelligence

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Artificial intelligence: an examination of its assumptions, history, goals achievements and prospects.

PHIL2309

Recognition and Reconciliation: Introduction to Hegel

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Introduces Hegel's general philosophical approach through a close examination of Hegel's *Phenomenology of Spirit*, his most famous work. Examines Hegel's ethical, social and political philosophy in the *Philosophy of Right*. Some attention will be given to Hegel's heritage in European philosophy, as well as contemporary Analytic philosophy. Issues examined include self-consciousness, normativity, civil society and freedom.

PHIL2310

Heidegger

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Heidegger's attempt to raise the question of the meaning of Being continues to have an important impact. This course begins with some of Heidegger's critical works such as: *Being and Time*, *What is Metaphysics?* *Early Greek Thinking*, *What is Called Thinking?*, *The Concept of Time*, *On the Way to Language*, *Identity and Difference*, *The Question Concerning Technology*. It then proceeds to look back to Heidegger's "destruction of metaphysics" and forward to the influence he continues to exercise on thinkers today.

PHIL2316

Philosophy of Religion

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Aims to study the phenomenon of religion, its relation to ways of life, and its construction of stories and myths. Drawing from a variety of religious sources, it analyses the different categories and forms in and through which religious ideals are expressed and justified. Topics covered include arguments for the existence of God, the concept of evil, faith and mysticism, human relation to the natural world, religion and morality, religion and gender, and free will and determinism.

PHIL2416

Nietzsche and Philosophy

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: EURO2400

As author of provocative and puzzling statements such as "God is dead", "truth is metaphor", "life is will-to-power", "soul is a word about the body" and the "social contract was written in blood", Nietzsche was arguably one of the most controversial thinkers of modern times. His more enduring and controversial ideas will be examined, including those about language, truth, morality, power, subjectivity and the body, history and time. The impact of his philosophy on twentieth century thought will be explored by examining interpretations of his work by figures such as Deleuze, Derrida, Foucault, Heidegger, Irigaray and Nancy.

PHIL2420

Environmental Ethics

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit

Aims to familiarise students with both the content and the processes involved in ethical decision-making in issues concerning the natural environment. Begins with an enquiry into basic concepts operative in discussions in environmental ethics such as 'value', 'nature', 'natural' and 'environment'. There is also an examination of various approaches to environmental debates including applied ethics, deep ecology, holism and ecofeminism. Students are encouraged to consider arguments arising from different value commitments and to understand the importance of, and the procedures associated with, the justification of a particular position.

PHIL2421

Philosophy, Education and Society

School of Philosophy

UOC6 HPW3

Prerequisite: 6 level 1 units of credit in Philosophy or Level 1 Education and 36 units of credit overall

An introduction to the theory and practice of philosophical communities of inquiry. Explores the ways in which philosophy may be reconstructed for educational and other social purposes. Examines the relations between community and inquiry, self and society, and democracy and education. Addresses the social utility of philosophy and its educational potential. Authors whose works are discussed include Aristotle, Jerome Bruner, John Dewey, Immanuel Kant, Matthew Lipman, G.H. Mead, Jean-Paul Sartre and Lev Vygotsky.

PHIL2424

Human Nature and Technology

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines theories of the fundamental nature of humans, with particular emphasis on the role that a conception of the human plays in moral and political theories. Also examines the idea that current technological developments are transforming human nature, and considers the ethical implications. Focuses on modern Western philosophy and includes texts by figures such as Rousseau, Kant, Hume and Nietzsche as well as more recent philosophers such as Habermas, Jonas, Foucault, Derrida.

PHIL2510

Political Philosophy: Equality, Freedom and Justice

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines concepts such as equality, freedom, rights, justice and community in the light of fundamental moral principles proposed by the main contemporary schools of political thought such as: the equal moral worth of individuals, justice as fairness and the value of cultural belonging. The principal approach considered will be political liberalism but others discussed will include anarchism, utilitarianism, libertarianism, communitarianism, socialism, feminism and poststructuralism.

PHIL2517

Representation and Sexual Difference

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: WOMS2500

Considers the nature of sexuality and ideas about the role of sexual difference in the constitution of the bodily subject. The social significance of the connection between gender and such distinctions as culture/nature, reason/passion and public/private is examined in the light of feminist critiques. Also raises questions about philosophy and feminism with respect to issues of argument, advocacy and style.

PHIL2519

Introduction to Chinese Philosophy

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: PHIL2520

Confucianism and Taoism are the two most influential philosophies originating from China. Examines the two traditions, set against a backdrop of other schools of thought such as Mohism, Legalism and Chinese Buddhism. This course involves close readings of the relevant primary texts. Students will be taught to read these texts. No previous knowledge of Chinese culture or language is assumed.

PHIL2520

Aspects of Chinese Thought

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: PHIL2519

There are many significant concepts underlying contemporary Chinese thought which have their origin in the classical Chinese schools of thought from pre-Confucian times. This course critically examines some of these concepts, such as the Confucian jen (humanity) and li (rules of propriety); and the Taoist tao and wu-wei (non-action).

PHIL2708

Reading Option

School of Philosophy

UOC6 HPW3

Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Students wishing to do work in an area not covered by an existing course or seminar may apply to the School to take a reading option. Not more than one such course may be counted towards a degree. Approval of a program for a reading option depends on its suitability and on the availability of a member of staff to undertake supervision.

PHIL2709

Ethics and Accountability

School of Philosophy

UOC6 HPW3

Prerequisite: 36 units of credit

Deals with the probity requirements of private and public sector organisations. Covers ethical failure in areas such as corporate crime, professional malpractice, and public accountability. Also considers measures to regulate conduct and prevent corruption: codes of conduct, ethics committees, ethics education, watchdogs and regulators, and whistleblower protection.

PHIL3910

Advanced Philosophy Seminar

School of Philosophy

UOC6 HPW3

Prerequisite: 30 units of credit in Philosophy; Excluded: PHIL3106

An in-depth treatment of selected philosophical problems or traditions. Involves particular focus on the skills required for independent philosophical research.

PHIL4000

Philosophy Honours (Research) Full-Time

School of Philosophy

UOC24 HPW5

Prerequisite: 54 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

The Honours year consists of a year-length thesis workshop, three session-length seminars and the writing of a research thesis under supervision.

PHIL4050

Philosophy Honours (Research) Part-Time

School of Philosophy

UOC12 HPW3

Prerequisite: 54 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

The Honours year consists of a thesis workshop, three session-length seminars and the writing of a research thesis under supervision usually over a period of two years.

PHIL4500

Combined Philosophy Honours (Research) F/T

School of Philosophy

UOC12 HPW2

Prerequisite: 48 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

For Combined Honours, candidates are required to take one course each in Philosophy and in the combined discipline as well as a thesis as approved by the Heads of the two participating Schools.

Note: Students contemplating Combined Honours are urged to seek advice from the Schools early in the program.

PHIL4550

Combined Philosophy Honours (Research) P/T

School of Philosophy

UOC6 HPW2

Prerequisite: 48 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

For Combined Honours, candidates are required to take one course each in Philosophy and in the combined discipline as well as a thesis as approved by the Heads of the two participating Schools.

Note: Students contemplating Combined Honours are urged to seek advice from the Schools early in the program.

PHPH2011

Introductory Pharmacology and Toxicology

School of Physiology & Pharmacology

UOC6 HPW6

Prerequisite: 6 units of credit from level 1 Biology (BIOS1201 pref); and 12UOC of Level 1 CHEM; and 6 UOC Level 1 MATH(not including MATH1041). Excluded PHPH3151

This course will cover the basic principles of pharmacology with an emphasis on drug action from the molecular and cellular levels to tissue, organ and whole animal levels. The course will provide an understanding of the principles of drug action (pharmacodynamics) in terms of drug chemistry, drug-receptor interaction, receptor theory and dose-response relationships. An introduction to receptor-mediated signal transduction, membrane receptors and autonomic pharmacology will be covered. The handling of drugs by the body through the processes of absorption, distribution, metabolism and excretion (Pharmacokinetics) will be covered in some detail along with drug analysis and the adverse effects of drugs. Aspects of clinical trials, legal aspects of drug registration and the principles of toxicology will be introduced. The laboratory classes will involve basic pharmacological and toxicological methods.

PHPH2101

Physiology 1A

School of Medical Sciences

UOC6 HPW6

Prerequisite: 6 uoc from level 1 Biology(BIOS1101 pref); and 6UOC of Level 1 CHEM; and 6 UOC Level 1 MATH(not including MATH1041). Recommended : BIOC2101 or BIOC2181.

Introduces fundamental physiological principles, from basic cellular function in terms of chemical and physical principles to the operation and interaction of body systems. The areas of physiology covered in this unit are excitable tissues, the cardiovascular system, blood and neuroscience. The unit includes a substantial series of practical class experiments on these different areas of physiology. This subject is taken by students enrolled in any of the Physiology programs.

Note: Students intending to major in Physiology or Pharmacology should note that prerequisites can only be waived at the discretion of the Head of Department of Physiology and Pharmacology. Biochemistry is highly recommended for a major in Physiology and essential for a major in Pharmacology.

PHPH2121

Principles of Physiology A

School of Medical Sciences

UOC6 HPW6

Provides an introduction to fundamental physiological principles for students in BOptom. degree and the Biomedical Engineering double degree programs. The areas of physiology covered in this unit are

excitable tissues, the cardiovascular system, blood and neuroscience, and includes a series of practical class experiments on these different areas of physiology.

Note: Restricted to students enrolled in BOptom degree course and the Biomedical Engineering double degree programs.

PHPH2201

Physiology 1B

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101.

The Areas of Physiology covered in this unit build on the fundamental physiological principles introduced in PHPH2101 Physiology 1A. The topics covered include reproduction, the respiratory system, the gastrointestinal system, kidney and body fluids and the endocrine system. This unit includes a substantial series of practical class experiments on these different areas of physiology. This subject is taken by students enrolled in any of the Physiology programs.

PHPH2221

Principles of Physiology B

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2121

The area of physiology covered in this unit builds on the fundamental physiological principles introduced in PHPH2121 Principles of Physiology A. The topics covered include reproduction, the respiratory system, the gastrointestinal system, kidney and body fluids and the endocrine system. This unit includes a series of practical class experiments on these different areas of physiology.

Note: Restricted to students enrolled in BOptom degree course and the Biomedical Engineering double degree programs.

PHPH2121 is highly recommended.

PHPH2501

Human Physiology A

School of Medical Sciences

UOC6 HPW6

Introduces fundamental physiological principles, from basic cellular function in terms of chemical and physical principles to the operation and interaction of body systems. The areas of physiology covered in this unit are excitable tissues, the cardiovascular system, blood and neuroscience. The unit includes a substantial number of practical class experiments on these different areas of physiology.

Note/s: Restricted to students enrolled in Program 3870 Bachelor of Science in Health and Exercise Science.

PHPH2502

Human Physiology B

School of Medical Sciences

UOC6 HPW6

The areas of physiology covered in this unit build on the fundamental physiological principles introduced in PHPH2501. The topics covered include reproduction, the respiratory system, the gastrointestinal system, kidney and body fluid balance, and the endocrine system. Again this unit includes a substantial series of practical class experiments on these different areas of physiology.

Note/s: Restricted to students enrolled in program 3870 Bachelor of Science in Health and Exercise Science.

PHPH2503

Exercise Physiology

School of Medical Sciences

UOC6 HPW6

Prerequisite: ANAT2111, PHPH2501

This courses focuses on how human structure and function is influenced by work and physical activity. Areas to be studied include energy metabolism and liberation, applied muscle physiology, and applied cardiopulmonary physiology. The unit includes a number of laboratories on these different areas of exercise physiology.

Note/s: restricted to students enrolled in program 3850 Bachelor of Science in Health and Sports Science.

PHPH3121

Membrane and Cellular Physiology

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101 and PHPH2201

This subject deals with the properties and physiology of excitable cells, building on the concepts introduced in PHPH2101. Topic areas include: how electrical signals are generated across cell membranes; the function, properties and structure of ion channels and transporters; how individual nerve, muscle and epithelial cells function; how cells communicate with each other in the brain, including synaptic transmission and receptor-mediated signaling; how alterations in functioning of transporters and channels can lead to disease states; modern experimental techniques in cellular physiology; and recent advances in this field. The course provides an ideal introduction for further detailed studies in single cell physiology and pharmacology, and provides a foundation for the understanding of higher physiological systems.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3131

Neurophysiology

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101 and PHPH2201

Brain mechanisms in sensation and perception are analyzed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms responsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cerebral cortical function. Segments are also included on nerve transmitters and neuromodulators; neural mechanisms in certain higher functions, eg language and memory; and nervous system plasticity. Experimental work introduces the student to electrophysiological and other neuroscience research techniques, and in seminar-discussion groups to a critical evaluation of neuroscience research literature.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3211

Cardiovascular Physiology and Pathophysiology

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101, PHPH2201

An advanced course focusing on the physiology and pathophysiology of the cardiovascular system. The course is divided into three units. Unit One covers molecular and cellular aspects of cardiovascular tissues; the vascular endothelium, cardiac and smooth muscle and cell communication. Unit Two addresses systemic cardiovascular physiology, from capillary exchange, the microcirculation, the ECG, control of regional blood flow and hemodynamics, up to regulation of cardiac output and blood pressure and the function of the cardiovascular system in exercise. Unit Three focuses on the pathophysiology of the cardiovascular system, with lectures delivered by leading researchers in the fields of atherosclerosis, heart failure, hypertension and gene-targeted approaches to combating cardiovascular disease. Lecture-based material is complemented by practical classes and problem-based learning.

PHPH3221

Endocrine, Reproductive and Developmental Physiology

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101, PHPH2201

There are two major components to this subject, which consists of lectures, practical classes, tutorials and case studies. The first component of the course uses problem based learning sessions and expert lecturers to cover a range of key topics in endocrinology and reproductive physiology. The second component of the subject details the physiology of pregnancy, and that of the fetus and the newborn.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3251

Clinical and Experimental Pharmacology

School of Medical Sciences

UOC6 HPW6

Prerequisite: PHPH2101, PHPH2201, PHPH3151, BIOC 2101 or BIOC2181, BIOC2201 or BIOC2291

This subject deals with the pharmacology of different drug classes, with an emphasis on the mode of drug action. Effects of drugs on the major

organ systems will be covered, including the cardiovascular, renal, endocrine, respiratory gastrointestinal and central nervous systems. Students will be introduced to emerging therapeutic strategies based on advances in understanding cellular physiology and drug action. The practicals will cover basic pharmacological methods from both clinical and experimental standpoints.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3302

Pharmacology for Optometry

School of Medical Sciences

UOC4 HPW4

Prerequisite: OPTM2101, PHPH2121, PHPH2221

Objectives: To introduce optometry students to the mechanisms of drug action and interaction, with an emphasis on the pharmacology of the eye. Pharmacodynamics, pharmacokinetics and toxicology of drugs used in the diagnosis and treatment of eye conditions; side effects of drugs used to treat systemic disease.

PHPH3501

Brain Mechanisms in Sensory-Motor Integration

School of Medical Sciences

UOC6

Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

Brain mechanisms in sensation and perception are analysed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms responsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cortical function.

PHPH3502

Skeletal Muscle in Health and Exercise

School of Medical Sciences

UOC6 HPW3

Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

This subject takes a scientific look at the concepts of skeletal muscle fatigue, training skeletal muscle for power and endurance and the effects of anabolic steroids and muscle stimulants like caffeine on skeletal muscle. It will also examine some of the common ways skeletal muscle can be damaged during sporting activities and the resultant mechanisms of muscle repair. There will be a detailed coverage of skeletal muscle development and the degenerative processes that occur as a result of aging. A series of advanced practical classes will examine the properties of isolated slow- and fast- twitch mammalian muscle. Students will design their own experiments to examine the effects of a range of drugs on their isolated muscle preparation. In the final practical session students will use themselves as subjects in order to examine the fatigability of their skeletal muscles in situ. The first part of the subject will examine the structure of skeletal muscle, the mechanism of force production, muscle fibre types, techniques for taking and analysing muscle biopsies and the innervation and central control of muscle activity. The second part of the course will look at the training for power, adaptations for endurance exercise, causes of skeletal muscle fatigue, muscle damage and repair and muscle pain. In addition there will be an examination of the pharmacological action of compounds such as clenbuterol, creatine and caffeine which affect skeletal muscle function and growth.

Note/s: restricted to students enrolled in program 3870 Bachelor of Health and Exercise Science.

PHPH3506

Principles of Exercise Prescription

School of Medical Sciences

UOC3 HPW3

Prerequisite: ANAT2111, PHPH2501, PHPH2503

This course will serve to integrate knowledge acquired in previous stages of the program. A course that is focused strongly on practical application of theory. Exercise prescription principles will be revised and then further developed with the extension into a variety of population groups from the apparently healthy through to clinical and athletic groups.

PHPH4218

Physiology 4 Honours Full-Time

School of Medical Sciences

UOC24

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars, and to submit a literature review. For further information see the Honours coordinator.

PHPH4224

Physiology 4 Honours Part-Time

School of Medical Sciences

UOC12

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars and to submit a literature review. For further information see the Honours coordinator.

PHPH4258

Pharmacology Honours Full-Time

School of Medical Sciences

UOC24

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars, and to submit a literature review. For further information see the Honours coordinator.

PHPH4264

Pharmacology Honours Part-Time

School of Medical Sciences

UOC12

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars and to submit a literature review. For further information see the Honours coordinator.

PHPH4508

Brain Mechanisms and Sensory-Motor Integration

School of Medical Sciences

UOC3 HPW3

Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

Brain mechanisms in sensation and perception are analysed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms responsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cortical function.

Note/s: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHTN4310

Optical Signal Processing

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE4313 and ELEC3004

Optical analogue signal processing; optical filters, bragg gratings; optical switches and memories, holograms; optical sensing elements.

PHYS1000

Physics Thinking

School of Physics

UOC3 HPW3

Techniques in scientific thinking and experimentation: seeing similarities, using diverse knowledge and techniques, having good ideas. Estimation in theory and experiment. The subject will mainly be taught in small groups organised to solve experimental and theoretical problems, some of them quite difficult. The problems may have fundamental as well as applied character, but the emphasis of the course is on universal principles, including conservation, symmetries, scaling and dimensional analysis, behaviour near equilibrium.

PHYS1111

Fundamentals of Physics

School of Physics

UOC6 HPW6

The methods of physics, describing motion, the dynamics of a particle, conservation of energy, kinetic theory of gases, properties of liquids, vibrations and waves, electricity and conduction in solids, magnetism and electromagnetic induction, alternating current, atomic nature of matter, X-rays, the nucleus and radioactivity, geometrical optics, optical instruments, wave optics.

Note: Introductory level course for students of all disciplines. Recommended courses: MATH1011 or MATH1131 or MATH1031.

PHYS1121

Physics 1A

School of Physics
UOC6 HPW6

Motion in a line and a plane. Oscillations. Motion of particles under the influence of mechanical, electrical, magnetic and gravitational forces. Rotational motion. Force, inertial mass, energy, momentum. Charge, potential, electric and magnetic fields. Capacitors, dielectrics. Electric current and circuits. Conservation principles applied to problems involving charge, energy and momentum.

PHYS1131

Higher Physics 1A

School of Physics
UOC6 HPW6

Vectors, kinematics, particle dynamics, work and energy, the conservation of energy, conservation of linear momentum, rotational kinematics and dynamics, simple harmonic motion, gravitation. Electrostatics, magnetostatics in vacuum, ferromagnetism, electromagnetic induction.

PHYS1149

Physics 1A (Aviation)

School of Physics
UOC6 HPW6

Corequisite: MATH1011 or MATH1079 or MATH1131 or MATH1031

The methods of Physics, describing motion, the dynamics of particle, conservation of energy, kinetic theory of gases, properties of liquids, vibrations and waves, electricity and conduction in solids, ions and ionic conduction, magnetism and electro magnetic induction, alternating current.

PHYS1199

Physics 1 (Optometry)

School of Physics
UOC6 HPW6

Vectors, linear mechanics, Newton's law of motion, rotational mechanics, electric forces, fields and potential. Magnetic forces and fields. Ampere's Law, Faraday's Law, electric circuit theory, AC, DC and transient circuits. Fluid mechanics; Bernoulli's equation; viscosity; Stoke's Law. Nuclear Physics; radioactivity, half-life, nuclear forces, binding energies, fission and fusion.

Note: Restricted to program 3950.

PHYS1211

Energy and Environmental Physics

School of Physics
UOC6 HPW6

Energy its uses and environmental impacts, thermodynamics, heat engines, heat transfer, solar radiation and its uses, properties of fluids, alternative energy sources, photons and atoms, photovoltaic energy, nuclear science and technology, environmental effects of natural and technological radiation sources, energy management.

PHYS1221

Physics 1B

School of Physics
UOC6 HPW6

Prerequisite: PHYS1121; Corequisite: MATH1231 or MATH1241

Waves in elastic media: application of wave theories to optical and acoustical phenomena such as interference, diffraction and polarisation. Properties of matter: solids, liquids, gases. Fluids and thermal physics. Inductance and electric circuit transients. Alternating current circuit theory.

PHYS1231

Higher Physics 1B

School of Physics
UOC6 HPW6

Prerequisite: PHYS1131; Corequisite: MATH1231 or MATH1241

Temperature, heat and the first law of thermodynamics, kinetic theory of gases. Waves in elastic media, sound waves, interference, diffraction, gratings and spectra, polarisation. Relativity, quantum physics, wave nature of matter.

PHYS1241

Higher Physics 1B (Special)

School of Physics
UOC6 HPW6

Prerequisite: PHYS1131; Corequisite: MATH1231 or MATH1241

This course is designed for Physics majors and all students taking an Advanced Science program that includes Physics. Physics1241 is the 'companion' course to PHYS1231 Higher Physics 1A, available in S1. The four topics covered in PHYS1241 are: 1. Quantum and laser physics, 2. A.C. circuit theory, 3. Solar system astrophysics, 4. Special relativity. Students taking PHYS1241 can choose the standard Higher Physics 1B laboratory program (HPW2) or, alternatively, may select a research project, supervised by a member of Physics' academic staff, totalling approximately 20 hours for the session. A list of projects offered will be circulated at the commencement of Session 2.

PHYS1249

Environmental Physics (Aviation)

School of Physics
UOC3 HPW6

Energy, its uses and environmental impacts, thermodynamics, heat engines, heat transfer, solar radiation and its uses, properties of fluids, alternative energy sources.

PHYS1601

Computer Applications in Experimental Science 1

School of Physics
UOC6 HPW6

An introduction to the internal structure, operating and interfacing of computers. Binary and digital electronic logic; logic control devices; bus communication structures; instruction execution in a processor; machine language code and instruction sets; interfaces and interaction schemes between processor and the outside world.

PHYS2010

Mechanics

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1231 or MATH1241; Corequisite: MATH2011 or MATH2110 or MATH2100; Excluded: PHYS2001.

Damped and forced harmonic oscillations and resonance phenomena. Central force problems and celestial orbits. Variational principles; the Lagrangian and Hamiltonian formulations of mechanics; coupled oscillators, normal modes, continuous systems and fields. Many-particle systems.

PHYS2020

Computational Physics

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1022 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1021 or MATH1231 or MATH1241 or MATH1031; Excluded: PHYS2001.

Use of computers to solve problems in Physics. Topics will be chosen from, but not limited to, random number generators, Monte Carlo techniques, sorting, numerical integration, gravitational, cellular automata, classical mechanics, and data analysis. Software used will include C and Maple.

PHYS2030

Laboratory A

School of Physics
UOC3 HPW3

Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1021 or MATH1131 or MATH1141 or MATH1031; Excluded: PHYS2031.

Experimental investigations in a range of areas: x-ray diffraction, work function, semiconductor bandgap, Hall effect, carrier lifetimes, nuclear magnetic resonance, magnetic properties.

PHYS2040**Quantum Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1231 or MATH1241; Excluded: PHYS2021.

Postulates of quantum mechanics, operators. Applications: potential wells, steps, barriers and tunneling, harmonic oscillator. H atom. Orbital and spin angular momentum, magnetic moment. Spin-orbit coupling.

PHYS2050**Electromagnetism**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241, MATH1231 or MATH1241; Corequisite: MATH2011 or MATH2110 or MATH2100; Excluded: PHYS2011.

Static and time-dependent electric and magnetic fields. Electric and magnetic potentials. Electromagnetic waves. Materials in electric and magnetic fields.

PHYS2060**Thermal Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241, MATH1021 or MATH1131 or MATH1141 or MATH1031; Excluded: PHYS2011.

Laws of thermodynamics, kinetic theory, microscopic processes, entropy, solid-state defects, Helmholtz and Gibbs' functions, Maxwell's relations, phase diagrams, chemical and electrochemical potentials.

PHYS2160**Astronomy**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1022

Galaxies, the distance scale, large scale structure of the universe, galaxy evolution, the very early universe.

PHYS2170**The Search for Life Elsewhere in the Universe**

School of Physics
UOC3 HPW2

Excluded: GENS4014

A scientific examination of the question 'Are we alone'. The material will include discussions on the origin and survival of life, current hi-tech searches for radio signals from extra-terrestrials, discoveries of new planetary systems, possible types of life-forms, Einstein's relativity, space-travel, and much more. A team of researchers will present the lectures, which will be supported by special tutorials which will look in detail at quantitative aspects of the subject.

Note: This course is not available to Advanced Science students.

PHYS2410**Biophysics 1**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1201 or PHYS1221 or PHYS1231 or PHYS1241

Biomechanics. Scaling theory. Fluid physiology and dynamics. Electrochemical potential. Membrane impedance, origin of membrane potentials. Generation and propagation of the nerve impulse. Physics of vision and hearing.

PHYS2601**Computer Applications in Experimental Science 2**

School of Physics
UOC6 HPW5

Prerequisite: PHYS1601

Technical aspects of computer hardware, peripherals and systems. Bus logic devices; simple interface design; use of a general purpose interface for communication, data collection and control. Speed and capacity limitations of conventional peripherals; techniques to improve performance.

PHYS2630**Electronics**

School of Physics
UOC3 HPW3

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1022; Excluded: PHYS2920, PHYS2031.

Electronic bench experiments and tutorials on diodes, transistors, operational amplifiers, power supplies and digital electronics.

PHYS2801**Atmospheric Science**

School of Physics
UOC6 HPW4

Prerequisite: PHYS1002 or PHYS1022 or PHYS1149 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1889 or GEOG1701 or GEOS1701 and MATH1021 or MATH1231 or MATH1079 or MATH1031 Excluded: PHYS2810

Atmospheric composition, thermodynamics of dry and moist air, stability, atmospheric motion and weather systems, energy transport, cloud processes, radiation laws, solar and terrestrial radiation, ozone formation and loss, 1D and 3D climate models and climate analysis, global warming. Laboratory exercises including chart analysis and computer simulations.

PHYS2810**Atmospheric Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1022 or PHYS1149 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1889 or GEOG1701 or GEOS1701 and MATH1021 or MATH1231 or MATH1079 or MATH1031; Excluded: PHYS2801.

Atmospheric composition, thermodynamics of dry and moist air, stability, cloud physics, atmospheric electricity, radiation laws, solar and terrestrial radiation, applications, ozone hole, atmospheric energy transport, 1D and 3D climate models, applications, global warming.

PHYS3010**Quantum Mechanics (Advanced)**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2021 or PHYS2040; Corequisite: MATH2120; Excluded: PHYS3210.

Fundamental principles; the Hydrogen atom; angular momentum; stationary and time-dependent perturbations; semi-classical radiation theory; variational methods; systems of particles; the Helium atom; matrix formulation.

Note: Not available without a mark of 65 or greater in PHYS2040.

PHYS3020**Statistical Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2060 or PHYS2011; Excluded: PHYS3021.

Thermodynamic probability, entropy, paramagnetism, canonical distribution, Boltzmann distributions. Open systems, grand canonical ensemble, chemical potential. Fermi-Dirac and Bose-Einstein distributions, Bose condensation. Radiation in a cavity (blackbody radiation). Chemical reactions, phase equilibria. Fluctuations, noise, Nyquist's theorem.

PHYS3030**Electromagnetism (Advanced)**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2011 or PHYS2939 or PHYS2050 and MATH2011 or MATH2111 and MATH2120 or MATH2130 and MATH2520 or MATH2620; Excluded: PHYS3230.

Electromagnetic fields; Maxwell's equations, Poynting theorem, potential formulation. Plane waves, reflection and transmission. Emission of radiation from accelerating charges, scattering and propagation of radiation in material media. Extended review of special relativity and its relations to electromagnetism.

Note: Not available without a mark of 65 or greater in PHYS2050.

PHYS3040**Experimental Physics A1**

School of Physics
UOC3 HPW4

A selection of experimental investigations in areas including: chaotic motion, high temperature superconductivity, semiconductors, electron and tunneling microscopy, X-ray and electron diffraction, laser physics and holography, optical fibre technology, Fourier optics and transform spectroscopy, magnetic measurement techniques and resonance imaging, electromagnetic waves and waveguides, nuclear counting techniques and neutron activation, vacuum techniques. Formal scientific report writing.

Note: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3050**Nuclear Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS3010 or PHYS3210 at a credit average or above.

Nuclear shell model; theory of beta decay; the deuteron, nucleon-nucleon scattering; theories of nuclear reactions, resonances; mesons and strange particles, elementary particle properties and interactions; symmetries and quark models; strong and weak interactions.

PHYS3060**Advanced Optics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241; Corequisite: MATH2120 or MATH2130

Review of geometrical optics, including ray tracing, aberrations and optical instruments: physical optics, including Fresnel and Fraunhofer diffraction, transfer functions, coherence, auto and cross correlation: applications of optics, including fibre optics, lasers and holography.

Note: This course may also be studied via distance education.

PHYS3070**Experimental Physics A2**

School of Physics
UOC3 HPW4

As for PHYS3040 Experimental Physics A1.

Note: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3080**Solid State Physics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2021 or PHYS2040; Corequisite: PHYS3010 or PHYS3210, PHYS3020; Excluded: PHYS3021.

Free electron model of metals, Bloch states and energy bands, reciprocal space and the Fermi surface, electron dynamics, Landau levels. Crystal structure, Brillouin zones, elementary diffraction theory, bonding, cohesive processes, impurity states, impurity conductivity. Lattice vibration, monatomic and diatomic chain, acoustic and optic phonons, Einstein and Debye models, dielectric effects. Recommended corequisites PHYS3010 or PHYS3210 and PHYS3020.

PHYS3110**Experimental Physics B1**

School of Physics
UOC3 HPW4

A selection of experimental investigations in areas including: chaotic motion, high temperature superconductivity, semiconductors, electron and tunnelling microscopy, X-ray and electron diffraction, laser physics and holography, optical fibre technology, Fourier optics and transform spectrometry, magnetic measurement techniques and resonance imaging, electromagnetic waves and waveguides, nuclear counting techniques and neutron activation, vacuum techniques.

PHYS3120**Experimental Physics B2**

School of Physics
UOC3 HPW4

As for PHYS3110 Experimental Physics B1.

PHYS3160**Astrophysics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2021 or PHYS2040

Stellar radiation, spectra classification. Hertzsprung Russell diagrams, determination of stellar masses and radii. Equations of stellar structure, energy sources in stars, nuclear reaction cycles energy transport, equations of state, degeneracy, opacity. Properties of main sequence stars, stellar evolution, structure of red giants and white dwarfs. The solar atmosphere.

PHYS3210**Quantum Mechanics**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2021 or PHYS2040; Corequisite: MATH2120 or MATH2130; Excluded: PHYS3010.

As for PHYS3010 Quantum Mechanics (Advanced), but treated in less depth and excluding matrix formulation.

PHYS3230**Electromagnetism**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2011 or PHYS2050 PHYS2939 and MATH2011 or MATH2111 and MATH2120 or MATH2130; Excluded: PHYS3030

As for PHYS3030 Electromagnetism (Advanced), but treated in less depth.

PHYS3310**Physics of Solid State Devices**

School of Physics
UOC3 HPW2

Prerequisite: PHYS3080 or PHYS3021

Review of electronic structure in semiconductors; p-n junctions; bipolar and field effect transistors including formation, characteristics and electrical breakdown. Optical devices including light emitting diodes and junction lasers. Integrated circuit structures.

PHYS3410**Biophysics 2**

School of Physics
UOC3 HPW2

Prerequisite: PHYS2011 or PHYS2060 and PHYS2410

Physics of self-assembling systems, cellular ultrastructure. Thermodynamics of irreversible processes, application to life processes. Thermodynamical description of ecological associations. Structure of proteins and other macro-molecules. Physics of nerve and muscle.

PHYS3510**Advanced Mechanics, Fields and Chaos**

School of Physics
UOC3 HPW2

Prerequisite: (PHYS2001 or PHYS2010) and MATH2011 or MATH2111
Lagrange's equations and applications, variational principles, dissipative systems, Hamiltonian formulation, canonical transformations, Poisson brackets, Hamilton-Jacobi equation, continuous systems and fields, stability and chaos.

PHYS3550**General Relativity**

School of Physics
UOC3 HPW2

Prerequisite: PHYS1002 or PHYS1231 or PHYS1241 or PHYS1221 and MATH2011 or MATH2111; Excluded: PHYS2520

Relativistic kinematics and dynamics, tensors and tensor operations, Christoffel symbols, formulation of general relativity, curvature of space, geodesics, gravitational field equations, Schwarzschild solution, tests of the theory, astrophysical and cosmological implications.

PHYS3630**Electronics**

School of Physics
UOC3 HPW3

Prerequisite: PHYS2031 or PHYS2630

Noise and drift. Instrumentation, amplifiers, precision amplifier techniques. Digital electronics. Oscillators. Modulation and demodulation, phase locked loops. RF techniques. Conversion between analogue and digital. Transducers. Bandwidth narrowing techniques. Power supplies.

PHYS3710

Lasers and Applications

School of Physics
UOC3 HPW2

Interaction between light and matter, fundamental properties of laser amplifiers and oscillators, giant pulse generation, mode locking and Q switching, specific laser systems including gas lasers and semiconductor lasers, applications of lasers.

Note: This course may also be studied via distance education.

PHYS3720

Optoelectronics

School of Physics
UOC3 HPW2

Introduction to non-linear optics, fibre optics, second harmonic generation, parametric amplification, phase matching, modulation of light, types of optical detectors including thermal detectors, photomultipliers and semiconductor detectors.

Note: This course may also be studied via distance education.

PHYS3770

Laser and Spectroscopy Laboratory

School of Physics
UOC3 HPW4

A selection of experiments using techniques and instruments connected to laser and optical spectroscopy, including laser safety, properties of lasers, design and construction of a Nd:YAG laser, acousto-optics, Fourier optics, holography, absorption spectroscopy, photoluminescence spectroscopy of semiconductors, etc.

PHYS3780

Photonics Laboratory

School of Physics
UOC3 HPW4

A selection of experiments using techniques and instruments connected to fibre optics and photonics in general, including basic properties of optical fibres, optical fibre gratings, optical fibre sensors, optical communications, wavelength division multiplexing, Erbium doped fibre amplifiers, optical domain reflectometry, etc.

PHYS4103

Physics 4 Honours Full Time

School of Physics
UOC24

Honours programs consist of advanced lecture subjects and project work. Students normally undertake two separate projects during the year, in different research areas. All students take subjects in quantum mechanics, statistical mechanics, solid state physics and electromagnetism and the standard model. Additional subjects are chosen from topics such as astronomy, molecular physics, condensed matter physics and quantum field theory.

Note: For the combined Physics/Geology honours see entry under course code BSSM4103. Admission to the honours program is at the invitation of the Head of School and normally requires at least a credit average in Year 3.

PHYS4949

Advanced Topics in Physics

School of Physics
UOC6 HPW4

Pre-requisites: PHYS3010 or PHYS3080 This course is restricted to students enrolled in program 3644

Typically this course would be a combination of one of the Physics Honours courses plus additional laboratory work from PHYS3040, PHYS3070, PHYS3110 or PHYS3120.

This course is restricted to student enrolled in program 3644

PHYS4979

Photonic Devices

School of Physics
UOC6 HPW4

Co-requisite/s: TELE4313 Exclusion/s: PHYS3720, PHYS3780 This course is restricted to students enrolled in program 3644

Introduction to non-linear optics, modulation of light, types of optical detectors, optical light sources. A selection of experiments using techniques and instruments connected to fibre optics and photonics.

PLAN0081

Work Experience

Planning and Urban Development
UOC24 HPW0

As a key part of their planning degree, students must undertake 48 weeks of approved employment related to the professional objectives of the Planning and Urban Development Program: for example, in private development companies, planning consultancies, state government departments and agencies, or with local councils. This is normally undertaken in the twelve months following the end of Session 1 of Year 3. The Program Head must approve the type of employment proposed. The requirements of courses PLAN0081 and PLAN0082 Work Experience must be successfully completed before a student will be permitted to graduate. Assessment components include documentation and submission of a work experience diary, a reflective report and participation in a compulsory seminar.

PLAN0082

Work Experience

Planning and Urban Development
UOC24

As a key part of their planning degree, students must undertake 48 weeks of approved employment related to the professional objectives of the Planning and Urban Development Program: for example, in private development companies, planning consultancies, state government departments and agencies, or with local councils. This is normally undertaken in the twelve months following the end of Session 1 of Year 3. The Program Head must approve the type of employment proposed. The requirements of courses PLAN0081 and PLAN0082 Work Experience must be successfully completed before a student will be permitted to graduate. Assessment components include documentation and submission of a work experience diary, a reflective report and participation in a compulsory seminar.

PLAN1011

Urban Society

Planning and Urban Development
UOC6 HPW3

The primary objective of this course is to encourage students to critically consider their understanding of the society in which they live. Students are introduced to different sociological perspectives that have been used to describe and analyse aspects of contemporary urban society and the way in which the sociological imagination can inform an understanding of urban life. Of central concern are the origins, theoretical traditions and contemporary debates of sociology. Issues of social equity, social class, technological change, ideal and imagined communities are canvassed underpinned by an interest in the role of planning in managing change and community development. The course is structured around a combination of lectures, weekly readings, and occasional audio and visual materials, with a variety of assessment tasks.

PLAN1042

Local Planning

Planning and Urban Development
UOC6 HPW6

This course is an introduction to local planning processes. It focuses on theoretical understandings and practical knowledge needed by planners working on local issues. The course is set in the broad context of the notion of the 'local' and its importance for communities and individuals. The identification of local planning issues, competing stakeholders, and strategies that planners can use to deal with conflicting local demands are considered. Students are exposed to these issues through lectures, class exercises, readings and field trips. Critical observation skills are developed during field trips. Basic planning research is undertaken in a group setting. Key readings in locality studies, communication, conflict resolution, and stakeholder identification/interests, help students to bring theoretical understandings into current practice. Assessment is based on different tasks usually including class participation, reading set texts, group projects on field excursions and a final examination.

PLAN1052

Quantitative Methods

Planning and Urban Development
UOC6 HPW6

An appreciation of the range, utility and meaning of quantitative research techniques is a fundamental part of the planner's methodological training. This course provides an introduction to basic techniques of data collection and analysis, introductory statistics and survey research. The course is structured around a series of lectures, supplemented by readings, exercises on questionnaire design, and computer exercises to familiarise students with Statistical Package for Social Sciences (SPSS) for Windows. Most of the SPSS exercises make use of real, planning-related data sets. Instruction is through lectures and computer laboratory sessions.

PLAN1101**Understanding Design**

Planning and Urban Development

UOC6 HPW6

The course is an introduction to urban design principles and basic design skills which are need by all planners. It involves an introduction to the basic vocabulary of planning and design terminology, exploration of the general principles of urban design, understanding the meaning of places and spaces, evaluation of good and bad urban design, development of basic skills of reading and interpreting maps and plans, and the creative communication of design ideas including drawing, mapping and presentation. Teaching involves lectures, workshops, discussions, and fieldtrips. Assessment is primarily via individual projects, group work and class participation.

PLAN1122**Development Processes**

Planning and Urban Development

UOC6 HPW6

An introduction to the processes involved in property development in market economies in the context of government supervision of regulatory and approval processes. Emphasis is on the various roles of private property developers and the ways in which they operate to achieve project outcomes. Topics include the nature and purposes of property development, real property law, development economics, the regulatory context, and taxation issues. Learning relies on lectures supplemented by student seminars focusing on individual projects. Assessment is based on tasks including individual assignments structured as consultant reports, seminar participation and an examination.

PLAN1241**Planning Theory and Practice**

Planning and Urban Development

UOC6 HPW6

This course aims to introduce students commencing their planning studies to the principles which underlie planning as a profession, the explicit and implicit meanings of planning and its activities, some of the basic methods planners use to achieve their goals, and the interrelationships between planning, society and governments. The course familiarizes students with the social context of planning, the roles of various organizations involved in planning processes, and the relationships between planning and related development and environmental activity. It does this by way of lectures, student-presented seminars, directed exercises and field investigations.

PLAN2032**Urban Design**

Planning and Urban Development

UOC6 HPW6

The role of urban design is to reunite the partnership between planning and design to help improve the quality and sustainability of the built environment. This course provides an introduction to, and basic understanding of, urban design methodologies in relation to current planning practice. Starting from an appreciation of the fundamentals of design, topics include site investigations, defining urban structure, enhancing the public realm, understanding building typologies, and controlling built form. The course is structured around lectures, methodological instruction, discussions, case studies, site visits, and design projects. Assessments are based on individual and group projects. Students submit projects in written reports and oral presentations, supported by drawings, sketches and images.

PLAN2041**Integrated Planning 1 - Communication in Planning**

Planning and Urban Development

UOC6 HPW6

The course targets a range of communication skills required of planners in practice and is designed to enhance student expertise in the oral, written,

graphic and digital presentation of planning information. Students are introduced to theories of communication as a foundation for their work. The course canvasses issues of professional writing, seminar presentation techniques, effective graphic displays, and communication of information through different media. The course is designed to encourage independent research skills as well as the team-based planning and cooperation necessary for major presentations. The major outcome is a series of multi-faceted student presentations on topics of contemporary planning interest. The course builds on acquired knowledge as the first in a series of three major courses in integrated learning and skills development.

PLAN2111**Economics of Planning and Development**

Planning and Urban Development

UOC6 HPW6

Micro-economic and macro-economic processes underpin urban and regional land-use patterns, property values, activity systems and social welfare. The processes of economic growth and decline are a perennial consideration of planning at different scales. The course focuses on development and planning across large urbanized and non-metropolitan regions. Students gain an understanding of how planning objectives are influenced by the aggregate impacts of uneven economic growth processes and economic behaviour. They gain familiarity with the potentialities and limitations of public policy in influencing spatial outcomes through studying economic issues and problems. Practical techniques for analysing spatial structure and development projects are introduced. Instruction is through lectures and tutorials.

PLAN2122**History, Heritage and the Built Environment**

Planning and Urban Development

UOC6 HPW6

This course injects an explicitly historical dimension into planning studies. It has four main interrelated foci: the historical development of urban systems and places, the development of modern planning theory and practice, methods of historical research, and assessment of heritage values in the built environment. The emphases are on Sydney and the 20th century Australian experience in international perspective. Topics include city typologies, historical planning paradigms, models of ideal metropolitan form, Sydney's planning history, planned capitals, and heritage procedures under the NSW planning system. Teaching involves lectures, videos, and fieldtrips, engaging students through discussion and workshops. Assessment is primarily via written research reports and class participation.

PLAN2152**Resources, Planning and the Natural Environment**

Planning and Urban Development

UOC6 HPW6

This course examines the interrelationships between urbanization, planning and the sustainable management of environmental systems. It situates the potential of land use planning in resource management relative to scientific bodies of knowledge and the roles of cognate professionals. The role of environmental factors in complex planning issues is considered. The assessment of environmental factors is considered at both the strategic and development application scale. The course reviews principles of ecologically sustainable development and how these may be interpreted in an urban context. Models for reporting on the 'state of the environment' are considered. Analytical and procedural tools for use in strategic and tactical management of the urban environment and non-metropolitan regions impacted by urbanization are introduced. Instruction is via lectures, tutorials and fieldwork.

PLAN3015**Social Planning**

Planning and Urban Development

UOC6 HPW6

The course is intended to provide students with a deeper understanding of the social and cultural issues central to contemporary urban planning. It provides in-depth examination of the diverse characteristics and needs of the different groups who inhabit and claim space in the postmodern city. The focus is on the notion of the humane, multicultural city, human expressions of difference and diversity, and the realities of everyday living. Groups explored include ethnic communities, Aborigines, children, youth, older people, homeless, poor, those with disabilities, and gays and lesbians. Using both key theoretical readings and practical exercises, students question their own prejudices and values and the way

that these impact on their professional roles. Assessment is generally based on participation in class exercises, workshops and field trips, set readings, some written assignments and a group presentation.

PLAN3031

Integrated Planning 2 -Strategic Planning

Planning and Urban Development
UOC6 HPW6

Strategic planning is a dynamic, analytical, and interdisciplinary process. It can encompass comprehensive area planning, targeted problem solving, and non-physical planning scenarios. A major characteristic is the synthesis of diverse information sources and community opinions into communicable planning documents. This course provides instruction in the theory and practice of strategic planning as an integrative activity. It adopts an applied focus in considering a typical multifaceted planning issue. Examples include environmental, town centre, open space, transportation, employment zone, redevelopment, heritage or general locality studies which typically underpin local environmental planning actions. The emphasis is on individual and team research, analysis, report production, and presentation, with a significant fieldwork component. The course explicitly builds on the skills and knowledge which students have gained in other courses and is the second in sequence of three major courses in integrated learning and skills development.

PLAN3032

Integrated Planning 3 - Master Planning

Planning and Urban Development
UOC6 HPW6

This course focuses on planning frameworks for the delivery of quality urban outcomes on complex major development sites. The primary aim is for students to acquire a working knowledge and skills for planning and development using techniques of Master Planning. This is an increasingly common technique in planning practice as government and the development industry strive to create more liveable and sustainable communities. The course introduces students to the theory, processes, techniques, and politics of master plans. The focus is more than physical and other aspects covered include social capital, economic appraisal and due diligence. Students workshop the development of a Master Plan for a real world development site. As the third in a series of integrative planning projects, the course enables students to synthesise knowledge and skills acquired in other courses.

PLAN3041

Planning Law and Administration

Planning and Urban Development
UOC6 HPW6

The course provides an overview of the legal system and environmental planning law with particular reference to the Australian experience. The course targets three main foci: planning law, planning administration and land valuation. Planning law considers historical and theoretical issues in law and jurisprudence. The administrative context within which planning operates as a function of government is addressed, principally the role and function of statutory bodies in the planning and environment area. The property dimension covers fundamental issues of property rights, definitions of value, methods of valuation, and compensation and betterment. Lectures and seminar presentations are involved with assessment based on written work and an examination.

PLAN3051

Development Assessment

Planning and Urban Development
UOC6 HPW6

This course introduces students to the implementation of planning objectives via the statutory development control system, with particular reference to the NSW planning system. Various development control systems are examined, based on common law, statute and policy. Considered in detail are aspects of statutory and policy planning including the nature of environmental planning instruments, the development application process, and statutory-based development assessment. Emphasis is placed on familiarising students with the practical and creative skills required by a professional planner in undertaking various tasks involved in the development assessment process.

PLAN3052

Qualitative Methods

Planning and Urban Development
UOC6 HPW6

This course focuses on the importance of inter-personal relationship skills in planning practice. The emphasis is on developing and refining such skills to facilitate interviewing techniques for successful qualitative research, dealing with people empathically and sensitively, team building, community consultations and conflict resolution. Basic instruction is given in interviewing technique, its use in different qualitative research situations, community consultation, mediation and related planning techniques. Students undertake a variety of class exercises to develop their skills. A major qualitative research project involves in-depth interviewing, transcription preparation, data analysis, and reporting of findings. Students have the opportunity to reflect on and share experiences. Assessment is based on participation in class discussions and exercises, a major research project and reading set texts.

PLAN4031

Research Design

Planning and Urban Development
UOC3 HPW3

Consideration of issues of research design in planning studies that seeks to integrate a range of relevant methodological issues into a foundation for major research investigations. The primary focus is on the substantive research project in the final year of the planning degree. The course considers fundamental epistemological questions about research paradigms, explores the realities of the research process, and covers practical topics such as writing and presentation. Students gain an understanding of the conceptual, methodological, and technical bases for the construction and delivery of research projects. Lectures, tutorials and assessments guide students toward a developed thesis proposal and plan of study.

PLAN4121

Spatial Policy

Planning and Urban Development
UOC6 HPW6

Collective efforts to influence land use change and the structure and behaviour of spatial activity systems in their environmental, social and economic dimensions take place at different geographical scales. This advanced course focuses on the supra - local - regional - scale: that is, metropolitan sub-regions, metropolitan regions as a whole, and non-metropolitan regions. The emphasis is primarily on the metropolitan scale where the conditions requiring spatial planning are most in evidence. The course addresses the organization of government and public-private relationships in achieving spatial planning objectives. While the empirical focus is primarily on the Australian scene the principles apply internationally and reference is made to international cases. Instruction employs lectures and class discussions. Assessment is via research papers and student presentations

PLAN4132

Thesis Project

Planning and Urban Development
UOC12 HPW2
Prerequisite: PLAN4031

A major research project is the culmination of the undergraduate planning program. The form of the project is most conventionally a written thesis. The option of incorporating a significant multi-media (e.g. CD-ROM) component may be approved. The thesis project is an individual study taken with the object of allowing students to acquire more specialised knowledge. The range of topics and the methodology is flexible, but a rigorous approach is required. A thesis proposal is developed in the complementary course PLAN4031. While most research, analysis and final preparation may be done off-campus, students are required to maintain close contact with their advisers.

PLAN4142

Professionalism, Ethics and Politics

Planning and Urban Development
UOC6 HPW6

This course in the final session of the final year of the planning degree addresses vital issues surrounding the professional planning practice. It equips students to think more critically of planning (particularly as a function of the state) and their role as future practitioners. Students develop an advanced understanding of the fundamentals of professional practice in terms of ethics, standards, negligence, as well as common tasks such as responding to a consultant's brief, managing a project, and preparing for court work. Hands-on skills are discussed in the broader context of philosophical positions, planning trends, and broader societal

environment in which planning practice is situated. Lectures, workshops and seminars from visiting professionals are employed.

POLS1002

Power and Democracy in Australia

School of Politics and International Relations
UOC6 HPW3

Explores Australian democracy starting with the basic premise that the notion of democracy is complex and sometimes contradictory. Democracy is heralded in Australia and across the world as an inherent good because it is rule 'of the people, by the people, for the people'. Yet there is no simple formula to apply that will ensure democracy is a success. In Australia, democracy involves voting by all citizens to ensure the people's will reigns. But there is no such clear idea as this. Furthermore, the nature of representative democracy and political parties complicates the outcome. Different, contending groups of institutions within society can appeal to different aspects of the concept of democracy in order to justify their actions. Explores the concepts of democracy, representation, government and opposition, parties, pluralism and interest groups, the state, the High Court and the Constitution, and the electoral system.

POLS1003

Australian Political Practice

School of Politics and International Relations
UOC6 HPW3

The nature and history of Australian political institutions in depth, including a study of the Australian constitution and federal structure and the role of the High Court, the political parties and the formal institutions of government (parliament, cabinet and the bureaucracy), elections and voting in Australia and pressure groups.

POLS1005

Politics and Crisis: An Introduction to Western Political Theory

School of Politics and International Relations
UOC6 HPW3

An introduction to Western political theory through the study of major texts taken from distinctly different political civilisations. Each text is studied against its social and intellectual background and in the context of the political crises to which it was addressed. The main themes of the lectures concern the relationship between political theory and practice and that between language and political awareness. The texts could include Plato, *The Republic*; Machiavelli, *The Prince* and *Discourses*; Hobbes, *Leviathan*; More, *Utopia*.

POLS1013

Thinking About Politics

School of Politics and International Relations
UOC6 HPW3

Introduces students to some texts, central questions and thinkers of politics in the West. Topics include the nature of justice and political obligation, the foundations of authority and legitimacy, the relation between politics and ethics, inequality, and toleration.

POLS1017

International Relations in the 20th Century

School of Politics and International Relations
UOC6 HPW3
Excluded: INST1000, INST1300

Traces the development of international relations and its major concepts and theories through key themes and events in international history over the past century. Examines ways in which international politics is viewed, and the events, forces, and trends that provide context and justification to these theories. Introduces the major theories of international relations, as well as developments such as the Cold War and the arms race, decolonisation and revolution, globalisation, and the rise of international organisations.

POLS1020

International Relations: Continuity and Change

School of Politics and International Relations
UOC6 HPW3
Excluded: INST1002, INST1400, POLS2005

An introduction to world politics and its study by scholars of International Relations. The course is in three sections which deal respectively with the key actors in, the dynamics of, and issues currently facing, the system of international politics.

POLS2003

The Political Development of Contemporary China

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

An introductory study of Chinese politics with special attention to political issues, values, and the conflicts of interests in policy-making. Includes the development and nature of communism in China, economics and development strategy, education and culture, defence and foreign policy.

POLS2008

Power and Policy in Australian Politics

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2024

Examines Australian public policies in the context of contemporary theories and techniques of policy analysis. Considers the problems of government administration and decision-making in the modern state. Examines the role of the state and the impact of economic rationalism and managerialism. Focuses on a range of policy issues and areas including: economic policy, social policy, Industrial relations and industry policy, the environment, Indigenous affairs, immigration and women's policy. Encourages specialisation in specific policy areas, drawing on relevant analytical frameworks to produce policy briefs and case studies.

POLS2020

Sex, Human Rights and Justice

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: AUST2025, WOMS2004

Examines thought and practices of human rights in connection with questions of sex and sexual relations. Conceptions of equality, autonomy and freedom will be examined, with some reference to classic liberal expositions of justice and the rights of the person. Areas include discrimination and harassment, abortion, prostitution and sexual slavery, pornography, sexual violence and rape. Attention will be given to both domestic and international policy in these areas.

POLS2023

Globalisation and Uneven Development

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2104, SLSP2701

Examines the problems and political prospects of 'Third World' or 'Less Developed' countries in the context of the development of a global economic and communications system. The first part examines the historical development of the system, the second part looks at its current structure and functioning and the third part considers the specific role of less developed countries and regions within the global system.

POLS2024

Theories and Concepts of International Relations

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2105

Introduces students to both classical and contemporary writing on the nature of international politics. Particular emphasis is given to topics such as war and peace, human rights and the future of the state system.

POLS2036

Political Development in Northeast Asia

School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

An introduction to contemporary political development in Northeast Asia. Applies Western modernisation theory to the process of socio-political and economic change in China, Japan, South and North Korea and Taiwan. Also discusses the relationship of these countries to the outside world. Their internal politics are analysed in the context of history, culture and economic development. Topics include: land and people, political culture, state/society relationship, environment, ideology and nationalism, government, the military and political parties. Examines similarities and differences in political development among the countries in the region. One particular emphasis will be on the on-going reform and democratisation process in Northeast Asia.

POLS2037**International Law: Power, Politics and Ideology**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: INST2300

International law is integral to the system of international politics. It is the medium through which states and other actors negotiate their positions on a vast array of subjects and via which politics has, over recent decades, undergone a process of globalisation. Introduces students to the alternative approaches to analysing the political role of international law and examines the role of international law in particular case study scenarios.

Note: No prior knowledge of law is assumed.

POLS2040**Politics and Business**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit

An examination of the relationship between business and politics at both international and national levels. The emphasis is on developed capitalist countries, but attention is also devoted to transitional, NIC and developing countries. Topics dealt with include globalisation, politics and business; corporatist relationships; business lobbying; business influence on public opinion; and corruption.

POLS2041**Sexuality and Power: The Social Relations of Sex and the Sexes**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: POLS3049, WOMS2006

Introduces some of the main theories of power and of sexuality; analyses different sexualities, and issues relating to sexuality, in the context of theories of power. Topics include compulsory heterosexuality; the construction of masculinity, femininity and desire; marriage and prostitution; sexuality and work; body politics; and pornography and popular culture.

POLS2043**Free Speech**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit

Examines the issue of free speech. Aims to engage students in thinking conceptually about speech and about the politics of speech policy. Examines free speech arguments, and the relationship between these arguments and conceptions of speech. In this context, students will discuss how speech is regulated and debate whether this regulation is appropriate or not. Types of regulated speech which will be investigated include hate speech, pornography and gender-specific language. Areas of speech regulation which will be investigated include parliamentary privilege, academic freedom, terrorism and national security.

POLS2046**Political Rhetoric**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit

Introduces students to the study of political rhetoric and the art of speech-making. Explores rhetorical theory including informal reasoning, aesthetic evaluation, prose style and an array of commonly used argumentative strategies. Focuses on political oratory in the twentieth century.

POLS2048**International Security**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2106, INST2302, POLS3023

Examines the concept and practice of security in international relations. Examines theories of security, before addressing central actors to the security project such as states, institutions and civil society forces. Then considers key issues for security in international politics, including traditional conflict; humanitarian crises; environmental change; population movements and terrorism.

POLS2024**Australian Foreign Policy**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 12 units of credit at the POLS2000 level

An examination of the foreign policy making and implementing processes in Australia; traditions, assumptions and perceptions; actors and audiences; interests and issues; incentives and constraints.

POLS3040**Early Political Texts**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 12 units of credit at the POLS2000 level

An examination of Thomas Hobbes's *Leviathan* (1651), its contexts, the controversies surrounding its reception and some of the uses to which it has been put in the twentieth century. *Leviathan* is, by general consent, the most important work in political theory written in the English language; but it is more than a political theory; it is an argument about philosophy, science, language, human psychology and religion. It is a work of rhetoric and satire and is one of the great prose works of English. It thus evokes a range of contexts, of the Reformation, the Scientific revolution, the British and French Civil Wars, the humanism of the Renaissance. On publication it proved highly controversial. It was largely overlooked in the nineteenth century but in our own it has been re-discovered as central to the understanding of political civilisation. It is still as controversial, though for different reasons, as it was in the seventeenth century. Studying it is a way into our own civilisation as well as Hobbes's own world.

POLS3045**Policy and Politics: Theory and Practice**

School of Politics and International Relations

UOC12 HPW3

Prerequisite: 12 units of credit at the POLS2000 level, including POLS2008

A policy oriented course based on a two day per week research internship attachment, usually with a member of parliament, a government department or unit or an NGO. Students must be able to demonstrate familiarity with the Australian parliamentary and political system. Students are required to produce a research report and a weekly journal and attend a weekly debriefing session as part of their assessment.

Note: Enrolments are limited to the number of available internships, which may vary from year to year. Available spaces are allocated by interview in order to match qualifications of individuals with the requirements of available internships.

POLS3054**Theorising International Political Economy**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 12 units of credit at the POLS2000 level

Introduces key perspectives and central issues in the study of international political economy. Establishes links between theories about the relationship of politics and economics, and the analysis of key structures and processes in the world economy. Explores the theories and concepts designed to investigate the expansion and globalisation of a world economy. Key substantive issues include state-firm relations, production, international trade, and monetary relations.

POLS3943**US Hegemony & International Law**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3043

Considers the US 'attitude' towards international law from 1918 to the present in the context of the rise of the US to sole superpower status and examines literature relating to topics such as the US and treaty law, US participation in international courts and tribunals, and US compliance with its international law obligations in order to assess current theoretical understanding of the political operation of international law and the implications for international law of the US as sole superpower.

POLS3948**Language, Satire & Politics**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3048

Explores the nature and problems of political analysis from the point of view of rhetoric and argumentation. Examines satire as another form of persuasive language and as a certain sort of evidence about politics and central political concepts.

POLS3952

Sovereignty, Order and the State

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3052

Explores the meanings of the concepts of sovereignty and order in the context of historical and contemporary discussions concerning the operations of the state, both internally and externally. Particular focus is given to the early development of the theory of sovereignty and to the attacks on this notion made in the name of pluralism and internationalism, now and in the early part of this century. The question of justice in international politics, the issues of post-nationalism and the future of the state are also examined.

POLS4000

Politics and International Relations Honours (Research) Full-Time

School of Politics and International Relations

UOC24 HPW5

Prerequisite: 54 units of credit in POLS at an average of at least 70%, including at least 6 units of credit from POLS1###, and 12 units of credit in Pre-Honours (or equivalent) POLS 3### courses at a minimum of 70% each

During the honours year, students are required: a) to undertake an original piece of research work extending throughout the year and to submit a thesis based upon it; b) to complete two coursework courses offered in the first Semester; c) to participate in the thesis workshop each week in the first Semester.

POLY3011

Polymer Science - Theory

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CHEM2021, INDC2040

Polymerisation chemistry and processes. Step and radical chain polymerisation. Ionic (including stereo regular) polymerisation. Methods including bulk, suspension, emulsion, solution and gas phase polymerisation. Industrially important polymers and their manufacture. Principles of analysis. Molecular weight distribution. Thermodynamics of polymer solutions. Polymer chain conformation. Viscoelasticity. Mechanical behaviour. Polymer morphology. Thermal behaviour and analysis. Chemistry and physics of elastomers. Elements of polymer compounding and fabrication. New polymers.

POLY3012

Polymer Science - Practice

School of Chemical Engineering and Industrial Chemistry

UOC3 HPW3

Prerequisite: CHEM2021, INDC2040, POLY3011

A series of practical laboratory exercises designed to illustrate the kinetics of polymerisation and the mechanical behaviour and properties of polymers.

PSYC1001

Psychology 1A

School of Psychology

UOC6 HPW5

Excluded: GENB4001, GENS9001

This course introduces the content and methods of psychology as a basic science, with emphasis on the social bases of behaviour. After an initial review of the historical foundations for the scientific study of human behaviour, several specific topics related to the social aspects of human behaviour are discussed. Specific topics covered in this course include: development, measurement of personality, theories of consciousness, and social influences on behaviour. In addition, training in the methods of psychological inquiry and basic procedures of data analysis is also provided.

PSYC1011

Psychology 1B

School of Psychology

UOC6 HPW5

Excluded: GENB4002, GENS9002

This course introduces the content and methods of psychology as a basic science, with emphasis on the biological bases of behaviour. Specific topics covered in this course include: perception, learning, memory, motivation, emotion, and abnormal behaviour. After describing the basic phenomena within an area, the goal will be to explore the neural bases of these behaviours. In addition, training in the methods of psychological inquiry and basic procedures of data analysis is also provided.

PSYC1021

Introduction to Psychological Applications

School of Psychology

UOC6 HPW4

Restricted to students currently enrolled in program 3432 Psychology

The approach of psychology to issues arising in the management of human affairs and to the remediation of human problems. Topics include psychology as a scientific discipline, an overview of areas such as clinical psychology, neuropsychology and developmental disabilities in which psychological knowledge is applied to help individuals to change or to function optimally, and specific areas of public concern where psychology has a major contribution to make such as education, selection, training in industry, traffic and aircraft safety, and the law. The practical component focuses on the professional and social responsibilities of psychologists.

PSYC2001

Research Methods 2

School of Psychology

UOC6 HPW4

Prerequisite: PSYC1001, PSYC1011 Excluded: GENB4004, GENB4005, GENB4007, GENB4008, GENS9005, GENS9007, GENS9008 and GENS9009.

General introduction to the analysis of data by means of inferential statistics (z, t and chi square). Issues in the use of statistics (power, robustness). General features of research methodology. Laboratory and statistical traditions affecting design and control procedures. The implications of the use of inferential statistics for research methodology generally. Ethics of research and interpretation of data.

Note: PSYC1001 may be taken as a corequisite.

PSYC2061

Social and Developmental Psychology

School of Psychology

UOC6 HPW4

Prerequisite: PSYC1001, PSYC1011

Two strands: 1. Social - The basic principles of research and theory in social psychology, with a special emphasis on understanding how people relate to each other. Issues such as the nature of human sociability, the perception and interpretation of social behaviour, ambiguities of interpretation of interpersonal behaviour, verbal and nonverbal communication processes, impression formation and impression management and related topics will be covered. 2. Developmental - The age at which certain abilities or dispositions develop or are learned, and the processes by which developmental changes occur. Issues such as nature and nurture, continuity vs discontinuity, nomothetic vs ideographic approaches and the methods and ethics of developmental research will be covered from various perspectives - psychodynamic, biological/ethological, environmental/learning, and cognitive - developmental.

PSYC2071

Perception and Cognition

School of Psychology

UOC6 HPW4

Prerequisite: PSYC1001, PSYC1011

Introduces the fundamental principles underlying human perception and cognition such as sensory coding, perceptual organisation, perception of spatial layout, perceptual learning, object recognition, attention, memory storage and retrieval, problem solving and decision making. The practical program will provide an introduction to the use of psychophysical methods, experimental approaches to the study of cognitive processes, and the application of findings in society.

PSYC2081

Learning and Physiological Psychology

School of Psychology

UOC6 HPW4

Prerequisite: PSYC1001, PSYC1011

An examination of brain and behaviour relationships with emphasis on learning, memory and motivation. Topics may include habituation, sensitisation, classical/operant conditioning, basic motivations, hunger, sex aggression, neuropsychology of amnesia and normal memory.

Note: PSYC1001 may be taken as a corequisite.

PSYC2101

Assessment and Personality

School of Psychology

UOC6 HPW4

Prerequisite: PSYC1001, PSYC1011

Systematic measurement of various aspects of people occurs in many different settings such as clinical, counselling, legal, educational and vocational guidance, and personnel settings. An introduction to the principles and techniques of psychological measurement, including consideration of what makes tests useful, how to evaluate tests and factors that are important to consider in their interpretation. Underlying many tests is a theoretical position about personality. Discussion of how aspects of personality are operationalised and measured will enable students to understand how tests relate to these theories. The practical program will provide the opportunity to explore the application of tests in a number of different settings.

PSYC3001

Research Methods 3A

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001

Analysis of variance for single factor and multifactor designs. MANOVA model analyses of repeated measures data. Simultaneous inference procedures for contrasts defined on parameters of ANOVA and MANOVA models. General principles of experimental design. Analysing experimental data with the PSY program.

PSYC3011

Research Methods 3B

School of Psychology

UOC6 HPW4

Prerequisite: PSYC3001

Multiple regression and its application to prediction, analysis of designed experiments and construction of structural models. Principal components analysis and factor analysis. Data analysis using SPSS.

PSYC3051

Physiological Psychology

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2081

An overview of the neuroscience of learning, memory, and psychopathology (especially stress, anxiety, depression and addiction). Emphasis is placed on contemporary theories and approaches including the role of interactions between environmental events, synapses and genes.

PSYC3121

Social Psychology

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2061

A review of the history, principles and methods, and ethics of social psychology at an advanced level. Substantive research areas such as the nature of affiliation and attraction, interpersonal relationships, the study of beliefs, values and attitudes, persuasion and processes of attitude change, social influence processes, and group behaviour, among others, will be covered.

PSYC3141

Behaviour in Organisations

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001 and PSYC2061; Exclusion: PSYC3526.

The application of general psychological theories and principles to contemporary management problems. It will acquaint students with research in employee motivation, satisfaction, selection, training, evaluation, and teamwork as well as other topics in industrial and organisational psychology, including the role of the professional in organisations and in dealing with other professionals.

PSYC3201

Psychopathology

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2081

An introduction to the scientific analysis of behavioural and mental disorders. The major syndromes, focussing upon current models and theories of causation and the empirically-based evaluation of these aetiological models and theories will be described. Treatment of the disorders will be outlined, especially where modern treatment developments throw light on fundamental causal mechanisms. Professional and ethical aspects of various treatments will be considered.

PSYC3211

Cognitive Science

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2071

Considers a variety of different approaches adopted in the study of the mind. Critically appraises theories and models of mental processes and draws from studies of both normal and impaired cognitive functioning. Includes topics such as perception, visual cognition, attention, memory, reasoning, consciousness, and the association between mind and body. The professional implications of selected topics will be discussed.

PSYC3221

Vision and Brain

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2071

Seeing is an amazing achievement, taking up 40% of the visual cortex. This course will consider how we see and how this reveals and is related to principles of brain functioning. Topics will include stereo (3-D vision), the coding of brightness and colour, perceiving motion and self-motion, brain damage and the question of specialised visual systems, visual imagery, visual attention, and vision and art.

PSYC3241

Psychobiology of Memory and Motivation

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2081

Research and theory in memory and motivation as they underpin adaptive behaviour. Primary consideration will be given to general-purpose and specialised forms of learning. Implications for the origin and treatment of clinical disorders will be described.

PSYC3271

Personality and Individual Differences

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2101

The study of persons from two separate, but related perspectives. The psychology of personality involves the study of the structure and the processes involved in the organised functioning of individuals, their traits, cognitions and motives. The expression and measurement of the differences in those psychological characteristics between individuals and groups, and the theories or explanations that account for them, is what is involved in a psychology of individual differences.

PSYC3301

Psychology and Law

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2061

An introduction and broad overview to the discipline of psychology and law. You will be introduced to a wide range of forensic issues, civil and criminal, drawing on cognitive, social and clinical psychological research. The goal is to demonstrate the relevance of psychological research on the development of policy and all aspects of the legal process.

PSYC3311

The Psychology of Language

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2071

One of the features that distinguishes humans from other animals is their use of a sophisticated symbolic system for communication - namely, language. This course will examine how humans cognitively represent their language system in order to successfully produce and comprehend spoken and written words. All levels of language will be considered ranging from the smallest sounds up to full discourse within context. Evidence obtained from language dysfunctions and from investigations of language development will also be considered.

PSYC3331**Health Psychology**

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2061 or PSYC2101 Excluded: PSYC3536

This course aims to introduce students to some of the major theoretical and empirical work in Health Psychology. Its primary focus will be on the promotion and maintenance of health-related behaviour and the prevention of illness. The course will begin with a brief overview of core material in the discipline of psychology with an emphasis on personality, social and developmental psychology. The application of that knowledge will then cover health promotion strategies and methods (for example, improving diet-related behaviour and attitudes, initiating and maintaining exercise programs), and disease prevention skills and behaviours (for example, coronary heart disease, cancer, and smoking related problems).

PSYC3341**Developmental Psychology**

School of Psychology

UOC6 HPW4

Prerequisite: PSYC2001, PSYC2061

This is an advanced level course which provides an overview of theories and research in developmental psychology, with an emphasis on understanding how biological, cognitive, emotional, and social processes develop and interact. Specific topics may include prenatal growth, attention and memory, language development, cognitive development, development of attachments, moral development, and gender-role development. The implications of research in these areas for the understanding of emotional, intellectual and behavioural problems during childhood will be examined.

PSYC3516**Psychology for Optometry**

School of Psychology

UOC3 HPW2

Co-requisite OPTM3102

An introduction to various aspects of psychology of relevance to optometrical practice. Includes development of psychological theories, human development, social psychology, psychopathology, perceptual learning and human neuropsychology.

Note: Restricted to Program 3950 Bachelor of Optometry.

PSYC4053**Psychology 4A**

School of Psychology

UOC24

A supervised research thesis and coursework to be determined in consultation with the Head of School.

PSYC4063**Psychology 4B**

School of Psychology

UOC24

Prerequisite: PSYC4053

A continuation of PSYC4053.

PSYM5001**Psychiatry**

School of Psychiatry

UOC10

Prerequisite: MDSG4001

Objectives: To be aware of the key symptoms, signs and syndromes of psychiatric disorder; to be able to take a history and conduct a mental state examination; to have acquired those skills necessary for a doctor in general or non-psychiatric specialised practice to decide appropriate management strategies; to be aware of, and have some experience in basic

counselling skills; to be able to assess a patient's personality, psychological adjustment, coping repertoires, social function; to appreciate the importance of psychological factors in the diagnosis and treatment of illness; to be trained in interpersonal skills appropriate to clinical practice in any area of medicine; to be aware of the appropriate sections of the Mental Health Act and Guardianship Board legislation; to have received basic knowledge in special areas of development disability, forensic psychiatry, child psychiatry, transcultural psychiatry and psychogeriatrics; to be competent in prescribing psychotropic medications; and to be able to use simple behavioural techniques such as relaxation training.

Formal teaching seminars are held in the mornings and afternoons Monday to Friday in week 1, and mornings and afternoons Monday and Friday weeks 2-8. The remaining days are spent at Prince of Wales, St George, St Vincent's, Sutherland, Bankstown, Liverpool and Campbelltown Hospitals, where small group tutorials, case conferences and video analyses are carried out with academic and clinical staff, and clinical experience is obtained. Attachments to liaison psychiatry teams are organised so that students receive the appropriate teaching of skills related to general hospital patients. Visits to appropriate community facilities and to the Forensic Psychiatry Unit at Long Bay Gaol are organised. Voluntary attachments to Illawarra and to a number of rural sites (Wagga, Lismore, Port Macquarie, Armidale, Dubbo, Albury, Coffs Harbour and Taree) occur across the term.

Assessment: A video examination is held mid-term to assess interviewing skills. A written examination is conducted on the first day of the last week of term, and viva voce examinations are carried out during that week. A liaison psychiatry report and two clinical case histories are also part of the assessment.

PTRL1010**Introduction to the Petroleum Industry**

School of Petroleum Engineering

UOC3 HPW3

UNIT 1: Worldwide distribution of oil and gas reserves. Subsurface data sampling and interpretation. Measurement scaling. Core, log and test data. UNIT 2: Rock/fluid systems. Rock and fluid parameters used in the petroleum industry. Interrelations between these parameters. Coring and core analysis. Well logging and log interpretation. Well testing and test analysis. UNIT 3: Drilling of oil and gas wells. Classification of wells. Drilling operating systems. Drilling fluids. Well completions. Gun perforating. Hydrocarbon production techniques. Hydrocarbon recovery mechanisms. UNIT 4: Economics of the upstream and downstream oil and gas industry. Supply and demand for oil and gas. International trading in oil and gas. Participation of Industry speakers.

PTRL1013**Computing for Petroleum Engineers**

School of Petroleum Engineering

UOC6 HPW3

Overview of computer applications in petroleum engineering. Scientific programming languages. Introduction to mathematical software and spreadsheets. Basic probability and statistical concepts for geological applications. Cross-plotting. Use of spreadsheets for well log analysis and petrophysical evaluation. Computer contouring. Interpolation of spatial data. Reserves estimation. Volumetrics. Monte Carlo simulation. Petroleum economics and cash flow analysis.

PTRL1016**Reservoir Rock & Fluid Properties**

School of Petroleum Engineering

UOC6 HPW6

Unit A: Porosity. The fluid content of subsurface rocks. Salinity, permeability, fluid saturations. Darcy's Law. The permeability coefficient. The measurement of permeability. The permeability of 'Dirty' Sands. Electrical and acoustic properties of reservoir rocks. The interpretation of fluid content data. Fundamentals of the behaviour of hydrocarbon fluids. PVT properties of oil-gas systems. Composition and phase diagrams of natural gases. Pseudo-critical properties of hydrocarbons. Surface tension and properties of the liquid and vapour phases. Properties of water and brines.

Unit B: An integrated reservoir engineering and formation evaluation laboratory incorporating experiments in porosity, permeability, capillary pressure, resistivity of reservoir rocks and PVT properties of crude oil. Introduction to the API standard laboratory equipment and their processes in measuring the above rock and fluid properties. Sample preparation from whole cores of different types of rock and shale. Demonstration of differences of properties in different rocks by conducting various

experiments. Understanding PVT properties of a mixture of hydrocarbon and their phase behaviour under different test conditions.

PTRL2010

Business Communications & Practices for Petroleum Engineers

School of Petroleum Engineering
UOC6 HPW3

Communication skills: Preparation of resume. Background research for interviews and guidelines for conduct during interviews. Preparation of written reports and memorandums for maximum audience impact. Impromptu and prepared oral presentation skills.

Business Practices: Joint Ventures, contracts, company structures, types of interest, stockmarket terminology and activities, acreage and reserves acquisition, farming, company annual reports, company special reports, oil and gas marketing, reserves reporting, relations with Governments and partners.

PTRL2014

Fluid Dynamics in Porous Media

School of Petroleum Engineering
UOC3 HPW3

Prerequisite: PTRL1016

Hydrostatic pressure and geothermal gradients. Darcy's Law. Porosity-permeability relationships and rock microstructures. Steady-state inclined flow and pressure potential. Steady-state radial flow. Flow in series and in parallel. Compressible gas flow Klinkenberg effect. Vertical well model and skin effect. Radial diffusivity equation and pseudo steady-state flow.

PTRL2015

Well Drilling Equipment & Operations

School of Petroleum Engineering
UOC3 HPW3

Introduction to physical processes involved in drilling oil and gas wells. Rotary drilling rigs for both land and offshore operation. Drilling equipment including rig powering and transmission, hoisting, rotary systems, BOP equipment and hookup, drill pipes and collars. Drilling fluid circulating systems including pumps, mud tanks, mud mixtures and mud cleaners. Elements of rock mechanics and its application in drilling. Selection of drill bits and penetration rate optimisation. Rig sizing and selection. Special marine equipment.

PTRL2016

Introduction to Petrophysics

School of Petroleum Engineering
UOC3 HPW3

Prerequisites: PTRL1010, PTRL1016, GEOS3321

The study of petroleum reservoirs. Fundamentals of petrophysics. Interrelation between petrophysical parameters. Borehole environment. Invasion profiles and invasion characteristics. Hydrocarbon mobility. Acquisition of petrophysical data. Data quality assurance. Presentation of petrophysical data. Measurement of natural gamma rays. Formation waters. Importance of formation water characteristics. The SP curve. Wellsite log evaluation. Formation resistivities. Shallow and deep resistivity measuring devices. Porosity related measurements with well logs in clean and shaly sands. Sonic (Acoustic), Formation Density and Neutron logs. Practical work with well log and core analysis and well pressure data.

PTRL3008

Reservoir Engineering A

School of Petroleum Engineering
UOC6 HPW3

Prerequisite: PTRL2014

Capillary-gravity equilibrium and initial fluid distribution. Relative permeability, capillary pressure, rock microstructure and multi-phase flow. Review of oil-gas phase behaviour and fluid PVT properties. Material balance equations. Calculation of water influx from material balance.

PTRL3009

Reservoir Engineering B

School of Petroleum Engineering
UOC6 HPW3

Corequisite: PTRL3008

Recovery factors, mobilisation, displacement and sweep efficiencies. Fractional flow analysis and displacement efficiency. Heterogeneity and gravity segregation and their effect on recovery. Water and gas coning.

Unsteady-state field water influx calculations. Determination of aquifer parameters from history matching. Pseudo relative permeability and vertical equilibrium. Decline curve analysis.

PTRL3013

Reservoir Characterisation and Modelling

School of Petroleum Engineering
UOC3 HPW3

Prerequisites: PTRL1013, PTRL2016, MATH2899

Overview of reservoir characterisation and modelling problems. Reservoir mapping. 3D modelling. Univariate, bivariate and multivariate statistics for geological data analysis. Pattern recognition techniques. Petrophysical predictions from well logs. Introduction to petroleum geostatistics. Variograms. Kriging. Uncertainty quantification. Stochastic reservoir modelling. Sequential simulation. Gaussian simulation. Indicator simulation. Integrating seismic attributes, well tests and production data. Constraining reservoir models with various sources of information. Reservoir upgridding and upscaling.

PTRL3016

Field Development Geology for Petroleum Engineers

School of Petroleum Engineering
UOC3 HPW3

Prerequisites: PTRL2016, GEOS3321

Introduction to the field development geology. Impact of sedimentary environment and associated diagenesis on field development strategy. Carbonate depositional processes and their effect on reservoir characteristics. Identification and characterisation of reservoir flow and barrier units. Reservoir seals. Importance of electrolog correlation in oil and gas field development. Identification and quantification of reservoir heterogeneity. 3D geological modeling. Reserves estimation. Geology of fractured reservoirs. Reservoir geophysics. Aquifer characterisation. New oil from old fields. Data planning during field development. Role of synergy in oil and gas field development. Case histories.

PTRL3021

Design Project for Petroleum Engineers

School of Petroleum Engineering
UOC6 HPW3

Prerequisite: CEIC2110

This course covers front-end engineering design of new production facilities for a potentially viable oil/gas field. Common offshore and onshore field development modes are first reviewed. Various oil/gas processing systems are studied, including gas dehydration, condensate handling, acid gas removal, LPG extraction, and crude oil stabilisation. Design tasks include process simulation, preparation of process flow diagrams/piping & instrument diagrams, HAZOP studies, and project management arrangements. Students will make extensive use of a commercial process simulation software package during tutorials. Each student shall carry out an example facilities scoping study and submit this as their final design report.

PTRL3023

Formation Evaluation

School of Petroleum Engineering
UOC6 HPW6

Prerequisite: PTRL2014, PTRL2016

Unit A - Well Log Analysis: Lithology plots. Saturation, irreducible saturation and permeability studies from well logs. Shaly sand analysis. Complex reservoir analysis. Wireline Formation Testing. Integration of core, log, well test and seismic data evaluation. Cementing quality monitoring. Gun perforating. Production Monitoring. Practical work with logs from an Australian oil/gas field. This Unit will prepare students for the petrophysical component of course PTRL4001.

Unit B - Well Testing: Theory of transient well testing. Principle of superposition. Drawdown and buildup tests. Actual and ideal buildup tests. Effects and duration of afterflow. Horner's approximation. Use of pseudo-pressure in gas well testing. Constant bottomhole pressure tests. Practical aspects of design and performance of field tests. Analysis of transient pressure data, effects of boundaries, reservoir heterogeneity, multiphase flow. Study of production, DST and formation interval tests. Pulse testing and multiwell tests. Computer assisted well test analysis techniques.

PTRL3024

Drilling Fluids & Cementing Techniques

School of Petroleum Engineering
UOC6 HPW6

Prerequisite: PTRL3016

Unit A: Introduction to the basic functions and properties of drilling fluids and cement slurries. Composition and related properties of drilling fluids and cement slurries. Types of equipment and methods used in cementing operations. Drilling fluid and cement slurry hydraulics. Determination of torque and drag. Calculation of cutting transport efficiency. Placement technique of cements. Gas migration through cement columns.

Unit B: Drilling and Production Laboratory: The laboratory includes measurement and control of the basic properties of drilling fluids (density, viscosity, filtration, lubricity and electrochemical properties) and cement slurries (density, viscosity, filtration, thickening time and mechanical properties). The objectives of this laboratory are to demonstrate the processes involved in drilling and cementing operations, introduce laboratory techniques which are used to select and optimise drilling fluids and cement slurry and to develop interest in experimentation.

PTRL3025

Petroleum Economics

School of Petroleum Engineering
UOC6 HPW6

Cash flow analysis in the petroleum industry (definition of cash flow, deriving net cash flow under tax/royalty systems and production sharing contracts, depreciation methods, inflation, sunk costs). Economic indicators (net present value, rate of return and other indicators). Fiscal analysis (the nature of petroleum fiscal regimes, the effects of fiscal regimes on exploration and field development decision making, economic analysis of fiscal regimes in Australia and Indonesia). Risk analysis (risks in each oil industry investment phase, project risk and expected value, sensitivity analysis, probability analysis, Monte Carlo simulation, probabilistic reserves estimates, probabilistic economics, portfolio analysis, asset management, risk and discount rates). Risk management (standards, establishing the context, identifying risk, analysing the risks, assessing and prioritising risks, treating the risks, insurance practices in the oil and gas industry, monitoring project risks).

PTRL4001

Integrated Oil/Gas Field Evaluation

School of Petroleum Engineering
UOC9 HPW6

Prerequisites: PTRL3008/3009/3013/3016/3023/3024/3025

The students gain hands-on experience of the complete evaluation of an actual field offshore Australia. This course covers (a) Field Geology-an analysis of the geological characteristics of the field itself, (b) Log and Formation Test Evaluation-analyses of the properties of the reservoir(s) to enable a later analysis of the reserves and production performance and finally (c) an estimate of the hydrocarbons in place-involving mapping the reservoir and incorporating reservoir uncertainties. (d) the construction of a computerised economic model incorporating the fiscal terms for oil and gas developments offshore Australia, (e) reservoir engineering, well test analysis and simulation of reservoir(s) to predict reserves, production performance and field development options (this also involves assessing the economics of the field development options) and (f) valuing the field and formulating a bid to acquire a participating interest in the property.

PTRL4015

Numerical Reservoir Simulation

School of Petroleum Engineering
UOC3 HPW3

Prerequisites: PTRL3009, PTRL3023

Reservoir simulation and reservoir management. Differential material balance equations. Relative permeability, capillary pressure and residual saturations in two and three-phase flow. Compositional reservoir simulator equations and the Black Oil Model. Numerical solution of simulator equations. Truncation errors and stability. Transmissibilities, upstream weighing, explicit and implicit and explicit treatment of transmissibilities. Numerical dispersion and grid-orientation effects. Model and grid selection. Model initialisation and capillary pressure-gravity equilibrium. Well models and equivalent radius of a well block, relating well grid-block pressures to pressure test build-up pressures. Use of well dynamic and vertical pseudo-functions. Planning and executing a reservoir simulation study. Reservoir simulation workshop.

PTRL4016

Natural Gas Engineering

School of Petroleum Engineering
UOC3 HPW3

Properties of Natural Gases: typical compositions. Equations of state: general cubic equations, specific high accuracy equations. Use of equations of state to find residual energy properties. Gas Compression:

positive displacement and centrifugal compressors; fans. Calculation of poser requirements. Compressible Flow in Pipes: fundamental equations of flow: continuity, momentum, energy equations. Isothermal flow in pipes: the Weymouth equation. Static and flowing bottom-hole pressures in wells. Fundamentals of Gas Flow in Porous Media: Steady-state flow equations. Definition of pseudo-pressure function. Gas Flow in Cylindrical Reservoirs: general equation for radial flow of gases in symmetrical homogeneous reservoirs. Non-dimensional forms of the equation; derivation of coefficients relating dimensionless to real variables. Infinite reservoir solution: pseudo-steady-state solution. Gas Well Deliverability Tests: Flow-after-flow tests: prediction of IPR curve and AOF for the well. Isochronal tests. Drawdown tests: need for data at two flow rates.

PTRL4017

Well Technology

School of Petroleum Engineering
UOC6 HPW6

Prerequisite: PTRL3024

Unit A - Well Design: Prediction of formation pore pressure and stress gradients. Determination of safety mud weight bounds for different in-situ stress conditions. Design and planning well trajectory. Surveying tools and methods. Design of drill string including bottomhole assembly. Drilling methods and equipment for directional, horizontal and multilateral wells. Selection of casing shoes, material properties and design of casing program.

Unit B - Well Completion and Stimulation: Well completion design, types of completion, completion selection and design criteria. Interval selection and productivity considerations: effect of producing mechanisms. Inflow performance and multiple tubing performance analyses using commercial software. Well stimulation and workover planning. Tubing-packer movement and forces. Tubing design: graphical tubing design and simplified tensional strength design. Selection of downhole equipment, tubing accessories and wellhead equipment. Basics of perforation, selection of equipment and procedure for perforating oil and gas wells. Technology of sand control: gravel packing. Fundamentals of well stimulation technologies: acidisation and hydraulic fracturing.

PTRL4018

Petroleum Production Engineering

School of Petroleum Engineering
UOC3 HPW3

Prerequisite: All Stage 3 Petroleum Engineering Courses.

Components of the petroleum production systems. Well productivity engineering. Production from under saturated oil reservoirs. Production from two phase reservoirs. Production from gas reservoirs. Pseudo critical properties of natural gases. Gas well deliverability for non-Darcy flow. The near-wellbore condition and damage characterisation, the effect of perforating conditions on well performance. Wellbore flow performance. Well deliverability. Well head surface gathering systems. Artificial lift systems. Horizontal well production. System analysis. Production Chemistry Basics (wax, scale, corrosion, emulsions).

RUSS1111

Introductory Russian 1

Russian Studies
UOC6 HPW6

Excluded: GENT0434

Intended for complete beginners, this course provides a basic introductory knowledge of spoken and written Russian. Assessment: weekly assignments, tests.

Note: Excluded native speakers of Russian and students with HSC qualifications.

RUSS1112

Introductory Russian 2

Russian Studies
UOC6 HPW6

Prerequisite: RUSS1111

A continuation of RUSS1111. Assessment: weekly assignments and tests.

Note: Excluded native speakers and students with HSC qualifications.

RUSS2101

Twentieth Century Russian Literature and Society

Russian Studies
UOC6 HPW3

Prerequisite: 36 units of credit

A survey of 20th century Russian literature and developments in Soviet society. Concentrates on the major events of the Revolution, World War II and Stalinism as reflected in literature. Authors studied in English translation include Gorky, Zamyatin, Bulgakov, Olesha, Solzhenitsyn, Pasternak, Chukovskaya, Shalamov. Assessment: 3 essay-type assignments.

Note: No knowledge of the Russian language required.

RUSS2102

The Great Terror

Russian Studies

UOC6 HPW3

Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: RUSS2302

An analysis of Stalinism, the purges and show-trials of the 1930s. The growth of Soviet organs of oppression, forced collectivisation, the Gulag system.

Note: No knowledge of the Russian language required.

RUSS2111

Intermediate Russian 1

Russian Studies

UOC6 HPW5

Prerequisite: RUSS1112 or RUSS1000; Excluded: RUSS2000, RUSS2001

A continuation of Level 1 Russian language for beginners (with consolidation and extension of written and oral proficiency in Russian). Assessment: weekly assignments, tests.

RUSS2112

Intermediate Russian 2

Russian Studies

UOC6 HPW5

Prerequisite: RUSS2111

A continuation of RUSS2111. Assessment: weekly assignments, tests.

RUSS2200

Soviet Cinema

Russian Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Provides an analysis of the history and development of film throughout Russian/Soviet history from the very early stages, including the essential turning points: Eisenstein, the Stalinist period, the thaw, selected masterpieces of the 60s and 70s; recent times. Note that the three hours per week does not include viewing time. Assessment: 2 essays.

RUSS3111

Advanced Russian 1

Russian Studies

UOC6 HPW4

Prerequisite: RUSS2112 or RUSS2001 or RUSS2000; Excluded: RUSS3000, RUSS3001

Advanced grammar, translation into Russian, essay-writing and advanced oral work. Assessment: weekly assignments, tests.

RUSS3112

Advanced Russian 2

Russian Studies

UOC6 HPW4

Prerequisite: RUSS3111.

A continuation of RUSS3111. Assessment: weekly assignments, tests.

RUSS4000

Russian Honours (Research) Full-Time

Russian Studies

UOC24 HPW5

Prerequisite: 54 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus two options and a 15,000-20,000 word thesis on a topic to be approved by the Head of Department.

RUSS4050

Russian Honours (Research) Part-Time

Russian Studies

UOC12 HPW3

Prerequisite: 54 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus two options and a 15,000-20,000 word thesis on a topic to be approved by the Head of Department.

RUSS4500

Combined Russian Honours (Research) Full-Time

Russian Studies

UOC12 HPW2

Prerequisite: 48 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus one option and a 15,000-20,000 word thesis on a topic to be approved by the Heads of the participating Schools/Departments.

RUSS4550

Combined Russian Honours (Research) Part-Time

Russian Studies

UOC6 HPW2

Prerequisite: 48 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus one option and a 15,000-20,000 word thesis on a topic to be approved by the Heads of the participating Schools/Departments.

SAED1402

Learning and Teaching Art & Design: Practice & Structure

School of Art Education

UOC3 HPW3

Corequisite: SAED1491.

This is the first in a series of three Learning and Teaching Art and Design courses. Students are introduced to practices of art and design teaching and system structures including syllabus and classroom requirements. Participants learn the importance of preparation, planning and evaluation. Content includes perceptions of teaching, management of risk in the art and design classroom, developing instructional skill, and an introduction to professional ethics. The course focuses on students becoming familiar with teaching and learning requirements of younger students while becoming aware of school practices and structures, and developing confidence as preservice Art and/or design teachers. Course content is applied to classroom settings in SAED1491 stage 1 professional experience school placement.

SAED1403

Foundations of Art and Design Education

School of Art Education

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces the field of art and design education using a series of key theorists and an interview with an art or design teacher. A modular course structure facilitates an investigation of territories, institutions and issues in art and design education today. Transition into university life and pre-service teaching is explored through introduction to scholarly practices of writing, information literacy and database skills.

SAED1407

Making Curriculum in Art & Design

School of Art Education

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces curriculum as a construct using current and proposed syllabuses in the Visual Arts and Design and Technology. Curriculum constructs shape understandings of art and design, classroom implementation, approaches to programming; the teacher's role; the resources used in developing learning experiences: including artists, designers, artworks and exhibitions and artworld references. Students will focus on how teachers generate content informed by personal interest and expertise, syllabus requirements and an understanding of good teaching practice.

SAED1491

Professional Experience Stage 1

School of Art Education

UOC3 HPW0

Corequisite: SAED1402.

Professional Experience 1 is a ten-day professional attachment orienting students to the conventional practices of the teaching profession and the typical school daily routine. The in-school component focuses on students becoming familiar with teaching and learning needs of younger pupils. Students are introduced to school procedures while developing

their confidence as prospective teachers. Students may extend and apply concepts and procedures introduced in SAED1402 Learning and Teaching: Practice & Structure, to prepare and implement lessons for classes in years 5/6 or 7/8 - in visual arts and/or design, working with whole classes and/or small groups.

SAED2401

Educational Psychology

School of Art Education

UOC6 HPW3

An introduction to the nature and objectives of educational psychology from a cognitive, social and ecological perspective, this course covers the nature of learning, the processes involved in social cognition and motivation, and theories of group processes in a school. Theories are applied through an analysis of the match between the teacher, the material and the student, the problems of different learning styles, the management of classrooms and principles of discipline and how these aspects contribute to planning and implementing a learning program in a positive educational environment.

Note/s: Prerequisites : SAED 1401

SAED2402

Learning and Teaching Art & Design: Language & Communication

School of Art Education

UOC3 HPW3

Prerequisite: SAED1402; Corequisite: SAED2491

This is the second in a series of three Learning and Teaching Art and Design courses. Students expand concepts and skills introduced in SAED1402 and applied in the first professional experience placement SAED1491. Course content focuses on the language and communicative demands of teaching and learning in Art and Design classrooms. The need for tutorial and instructional clarity in applying content to learning situations is explored through practical cases in the context of syllabus requirements. Students learn to extend their personal repertoire of teaching tactics through increasing awareness and development of classroom communication strategies, including language use, questioning and feedback skills.

SAED2405

Special Education in Art and Design Contexts

School of Art Education

UOC6 HPW3

Special Education in Art and Design Contexts extends and develops the pre-service teacher's experiences, attitudes and understandings of students with special and/or high support needs in the secondary school. Through in-class workshops, field trips, and hands on projects, students enhance their understanding of ways in which art and design can enhance the educational experiences of the special needs student. The Life-Skills component of syllabuses in Visual Arts, Design, and related subjects are introduced with regard to provision of appropriate experiences for students with special needs. The course, following a non-categorical approach, includes consideration of the psychology and special educational needs of students with mild and moderate intellectual disabilities and those with physical disabilities. It also includes the diagnosis and description of physical and learning disabilities and the role of and possibilities for art and design education in providing positive, supportive and inclusive educational choices and experiences for all students.

SAED2406

The Sociology of Education

School of Art Education

UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

Sociology examines the interaction between society and the individual and among socialising groups that shape behaviour. Students are encouraged to apply their knowledge of social processes for greater teacher effectiveness, to analyse and project strategies for effective student learning, to understanding group processes in classrooms and appreciating the school as a social system. Significant developments in and theoretical contributions to social research are investigated.

SAED2471

Histories of Australian Education

School of Art Education

UOC6 HPW3

This course aims to develop student understanding of the social and historical forces which have shaped traditions and policy in schooling and education in Australia. Social concepts including reproduction

theory, structuration and cultural capital will be used with more orthodox historical tools to analyse, critique and revise historical explanations of educational developments. The impact of intellectual modes and paradigms originating beyond the educational arena will also be explored. Some art educational trends will be identified and explained in terms of these broader intellectual and historical origins.

SAED2472

Creativity in Art and Design Education

School of Art Education

UOC6 HPW3

The course introduces students to a range of explanations of creativity drawn from the fields of philosophy, psychology, sociology and art and design education. Student will explore how creativity is applied in art, design and education practice. Investigative topics will include the creative subject, genius and creative personality; the creative process, problem solving and divergent thinking; and the product as an outcome of performance valued by its recognition within a field of practice. Through a combination of lectures, seminars, and workshops student will consider how theories of creativity inform art and design teachers' beliefs and practices affecting their views on art and design, teaching, students, the artefacts produced, assessment, the HSC examination and ARTEXPRESS.

SAED2473

Seminar in Art Education

School of Art Education

UOC6 HPW3

The aim of this course is to provide a general introduction to research in art education. Through involvement in this subject students will become familiar with research bearing on major areas of interest in art education.

SAED2474

Art Education and the Primary School

School of Art Education

UOC6 HPW3

This course is designed to expand the student's knowledge of the art of the primary school child and to examine approaches to teaching art at that level. Students will examine curricula already designed for use at the primary levels and will construct programs suitable for implementation in specific environments. Through lecture and discussion groups, the course will renew the theories of development linked with children's artistic development, consider the place of art education in the primary school curriculum, and design and evaluate appropriate learning experiences.

SAED2475

Multicultural Contexts

School of Art Education

UOC6 HPW3

The course aims to explore multiculturalism, encompassing personal and professional contexts. The terrain of multiculturalism is both historically and currently contested, variously impacting policy and practice. Through lectures and seminar experiences, students will analyse the way in which race, gender, class and ethnic consciousness is produced. This consciousness, and the various conceptions of multiculturalism are examined in relation to the personal and professional contexts in which students are engaged. The course provides the opportunity for students to increase their awareness of the cultural diversity of Australia and develop their sensitivity and responsiveness to the needs of minority groups.

SAED2478

Art Education and Aboriginal Studies

School of Art Education

UOC6 HPW3

This course is designed to foster students' insights into the social and political background that has affected, and continues to affect, the educational opportunities of Aboriginal people in contemporary Australia. Through lectures, discussions, seminars and visits by Aboriginal guest speakers, this subject will examine the following topics: Aboriginal Identity, Kinship, Law, Religious and Educational Systems and Land Rights. It will also explore European ethnocentricity, prejudice, stereotyping and racism. All topics will be illustrated by the works of both Aboriginal and non-Aboriginal artists.

SAED2479

Dialogues and Communities

School of Art Education

UOC6 HPW3

Through a planned series of workshops, this introductory course enables students to become familiar with some of the issues and contexts of contemporary community arts, including cultural development and democracy, cultural resources, real wealth/community value and social capital. The practice and management of selected contemporary groups, events and public art and design projects, along with more traditional applications of community arts practice as social and cultural development are explored, including the preparation of funding applications, field work and collaborative projects.

SAED2480

The Art Museum and Art Education

School of Art Education

UOC6 HPW3

This course aims to foster an awareness in students of the ideology and philosophies of art museums and an understanding of the broad educational functions of the museum including the vernacular appreciation of art and the development of a lifelong approach to learning. Students will have the opportunity to observe the educational functions of the art museum within a diversity of contexts and systematically investigate the plurality of roles which the museum performs within our society.

SAED2481

Media and Communication Contexts for Art and Design

School of Art Education

UOC6 HPW3

This course utilises contemporary theories and practices of communication to investigate the role of broadcast, print and electronic media in organising, producing and making knowledge and information in art and design curriculum. A series of case studies and lectures introduces key contributions to media studies (Baudrillard, Hall, Kuhn, McLuhan, Williams), theories of communication and texts (Berelson, Ellis, Fiske, Kress) social power, ideologies and discourse (Hall), reading and reception (Elliott, Giroux, Morley, Radway). Students will participate in workshops dedicated to the analysis of art, design and education media as they relate to print, radio, television, video, web and CD ROM.

SAED2491

Professional Experience Stage 2

School of Art Education

UOC3 HPW0

Corequisite: SAED2402.

Ten days professional experience in the practices, protocols, responsibilities and ethics of the professional art educator provides students the opportunity to extend their understanding of the function and organisation of schools and teaching practice within secondary contexts. The course models a typical high school structure and the concepts and conventions of the working educator are introduced and workshoped. Experts from a range of relevant educational fields are deployed to discuss policy and practice in their respective domains. These include the School Executive, the Child Protection Unit, Occupational Health and Safety, and Information Computer Technology. Students will investigate an individual school as a case study of these professional standards in practice. Each student works with a Cooperating Teacher in a negotiated program of classroom, departmental and whole school activities and responsibilities. Students with increased confidence plan and implement classes for Years 7-10 Visual Arts and Design.

SAED3402

Learning and Teaching Art & Design: Classroom Management

School of Art Education

UOC3 HPW3

Prerequisite SAED2491, SAED2402; Corequisite: SAED3491.

This is the third in a sequence of Learning and Teaching Art and Design courses. Students focus on integrating tutorial strategies introduced in Learning and Teaching courses and developed through professional experiences in schools. This is facilitated by focusing on the principles and practices of management in Art and Design classrooms through a series of clinical cases developed through a short webCT module utilising e-tutors. Capable educational management facilitates the development of positive learning communities, assured teaching performances and a productive classroom environment. Management entails student attitudes, content organisation, development and maintenance of safe working environments and teacher reflective practice in a range of art and design settings.

SAED3403

Issues in Contemporary Design Education

School of Art Education

UOC6 HPW3

Issues in Contemporary Design Education comprises an analysis and interpretation of the principal discourses shaping design education. This course examines the emergent possibilities for design education in the secondary school subject of visual arts and Key Learning Area Technology and Applied Studies, along with other curricula and educational applications. This course will facilitate the negotiation of two at times distinct fields and domains of knowledge, the fine arts and design within educational contexts.

SAED3404

Practices of Art and Design History in Education

School of Art Education

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course enables students to examine a range of conventions of art and design history. Fieldwork and in class debates provide real world contexts for the development of teaching strategies appropriate to pupil learning historical content in an active and authentic way. This is undertaken while developing an ability to explore and apply historical methodologies to art and design cases within the educational conditions of setting, student and curriculum. Students consider the educational significance of concepts of the historical event, the interpretation of artworks in cultural and historical contexts and the formation of spatio-temporal relationships among artworks.

SAED3407

Curriculum Studies in Art Education

School of Art Education

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces and develops interpretive and critical perspectives in curriculum, with particular reference to contemporary art and design curriculum and theory and practice. Contributions to the field by significant educators and the principal theoretical positions in curriculum are examined. These orientations or ideologies are informed by the wider theoretical and philosophical contexts and related to art and design educational curriculum practice. Political, historical and institutional structures shaping curriculum contexts in visual arts and design with an emphasis on local contexts are investigated. The struggles and dilemmas manifested in the contested values of and challenges to contemporary curriculum discourse are considered.

SAED3491

Professional Experience Stage 3

School of Art Education

UOC3 HPW0

Prerequisite: SAED2491, SAED2402; Corequisite: SAED3402.

Professional Experience 3 involves further in-school professional experience. Students work in a secondary school setting selected with a view to diversifying their experience of a range of educational cultures and practices. Students are expected to extend concepts of the demands of the teaching profession introduced in SAED2491 including administration, collegial and community consultation, together with visual arts and design expertise demonstrated through completion of required classroom projects.

SAED4051

Practices of Research in Art, Design and Education

School of Art Education

UOC6 HPW3

Research is broadly conceived in this subject as a pattern of practices in which the major agencies which contribute to the research process are perceived as a mutually dependent relation. This course introduces students to the agencies of investigative practice in the humanities and social sciences and to an understanding of their role in the validation, analysis and interpretation of content within the domains of art, design and education. While practices of research in art, design and education vary widely in the their instrumental and political significance it is nevertheless the goal of this subject to enable students, through the analysis of exemplars of research, to rehearse these practices in a manner consistent with an apprenticeship model of learning. In particular students

will be able to integrate and apply systematically key agencies of research practice in art, design and education including - the role of explanatory theory, the functional stance of the researcher, the constraints imposed by art as the object of investigation, the use of nomothetic and ideographic methods, and the conventions of proposal writing.

SAED4052**Theoretical Frameworks in Art and Design Education**

School of Art Education

UOC6 HPW3

This course aims to introduce students to the theoretical frameworks which form the basis for the conception of visual arts education as a distinctive field. Theoretical frameworks in art education will be explained as a largely discontinuous collection of histories. These histories are united by ruling paradigms many originating outside of the field in the human sciences, and in the practices of the visual arts. Examples include psychoanalytical approaches to creativity anthropological and socio-cultural studies, and cognitive theories.

SAED4053**Curriculum in Art, Design and Education**

School of Art Education

UOC6 HPW3

This course will provide students with modernist and post-modernist theoretical frameworks of curriculum evaluation and critique. Particular reference will be made to the critical methodologies of Habermas and the genealogical archaeology of Foucault as appropriate to an interpretation of the visual arts in education.

SAED4055**Honours Research Project in Art and Design Education Studies**

School of Art Education

UOC6 HPW12

Prerequisite: SAED4051.

This course enables students to prepare and complete an Art or Design Education research project in a chosen area of specialisation. Students will complete a research project submitting a report, which identifies an issue or problem of art or design educational significance and demonstrates understanding and appropriate application of selected methodologies to the investigation of the chosen problem, presented in the form of a project report of 5500-7500 words in length.

SAED4056**Theories of Knowing in Art, Design and Education**

School of Art Education

UOC6 HPW3

This course aims to further students' understanding of the cognitive foundation of the visual arts. It provides a general introduction to epistemology including concepts such as belief, truth, perception and representation. Reference will be drawn to recent concepts in metaphysics including, theory of mind, ontology and self. The course goes on to reposition these concepts within the assumptions of a variety of philosophical perspectives. Students will be required to examine a range of these concepts and perspectives for their relevance to the teaching of art.

SAED4057**Art and Design History in Education**

School of Art Education

UOC6 HPW3

This course introduces a range of contemporary theories of art and design history. Students will examine and evaluate art-history methodologies and apply them to educational settings within the context of general education. The textual, interpretive and revisionist character of the historical act are experienced, analysed and understood as a set of interpretive and explanatory practices which enable identification and revision of historical narratives.

SAED4403**Aesthetics in Art, Design & Education**

School of Art Education

UOC6 HPW3

Prerequisite: SAED 3404

This course aims to provide students with opportunities to examine aesthetics and art theory as these relate to the teaching of art and design to increase their critical awareness, to become more aware of their own philosophy of art and design education and its implications for their

teaching. Through a combination of lectures and seminars the subject will investigate the ideas and aims of aesthetics in educational contexts.

SAED4406**Philosophical Issues in Education**

School of Art Education

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The aim of this course is to introduce students to contemporary philosophical theories applied to the field of education. Using the critical theories of society put forward by Jurgen Habermas, students will analyse knowledge and human interests in order to critically understand a range of significant educational issues in terms of their technical, practical and critical consequences.

SAED4472**Independent Study in Art, Design, and Education**

School of Art Education

UOC6 HPW3

Enrolment Requirements: Completion of 48 Units of Credit in Art Education Core Courses

This course provides senior student with the opportunity to explore an area of art education, which is of particular interest. In collaboration with a staff member, students undertake a study in some issue or topic in art or design education, which is not encountered in other scheduled courses. Students are expected to demonstrate initiative and organisational skills in independently pursuing the research process and reaching educational objectives through completion of a series of preliminary investigations and construction of a short critical paper arguing a position regarding the selected issue/topic.

SAED4473**Politics and Identity in Art and Design Education**

School of Art Education

UOC6 HPW3

This course provides students with opportunities to examine how practices of governments are manifested in civic values and cultural policy, and influentially reflected through art and design education. The impact of cultural theory upon education and understanding within the arts will be examined as a series of traditions, habits, practices, values and expectations. Students will become familiar with the way in which concepts such as identity, subjectivity, alterity, ethnicity, gender and post-colonialism mediate relationships between artworld and popular perceptions, governmental priorities, and art and design education. Students will focus on a range of historical and contemporary cases to understand the mechanisms and manifestations of politics, identity and power in art, design and educational contexts.

SAED4474**Dilemmas of Praxis: The State, the School and the Educator**

School of Art Education

UOC6 HPW3

Excluded: SAED2472, COFA4025

This course utilises the student's internship experiences as a platform to explore the ethical, political and pedagogical dilemmas entailed in the School. Students will utilise a range of contemporary perspectives to explore philosophical, sociological and political dilemmas and conflicts in the context of education. Perspectives include Althusser's ideological state apparatuses, Giddens's Structuration; Habermas's communicative action; and Foucault's notion of discourse and difference.

SAED4491**Professional Experience Internship**

School of Art Education

UOC24 HPW3

Prerequisite/s: SAED 2401, SAED 2406, SAED 3491, SAED 3402, SAED 3404, SAED 3407

During the Professional Experience Internship students make a full time teaching commitment in a secondary school. Students are required to take responsibility for several classes, including preparation of lessons and associated teaching materials, complete administration and record keeping as required by the school, including school reports, participate fully in the professional obligations of the school such as sporting and co-curricular activities, staff meetings, professional development days and community consultations. Students should demonstrate their knowledge of professional conduct required by the college and the school.

Students plan, implement, evaluate and document a curriculum of ten weeks duration for a selected class. Clinical supervision methods, applied at five weekly intervals, in consultation with their cooperating teacher, identify and address their developing teaching practice.

The Professional Experience Internship requires a synthesis and application of theoretical and practical understandings introduced and examined throughout the course. The Internship is supervised by cooperating teachers and jointly assessed by cooperating teachers and faculty of the School of Art Education.

Students may apply for a variation of program that will entail a placement for the final two to four weeks of the Professional Experience Internship in a museum, cultural, industry, media or community setting. These placements are competitive and subject to the completion of the related Art Education Elective (consult Head of School for conditions) and the approval of the Head of School. Students should consult the lecturer in their elective orientation for further advice.

Note/s: Prerequisites: SAED 2401, SAED 2406, SAED 3491, SAED 3402, SAED 3404, SAED 3407

SAHT1101

Mapping the Modern

School of Art History and Theory
UOC6 HPW3

Commencing in the nineteenth-century and concluding with World War Two, this course examines seminal art and design movements and tendencies within changing social, political and cultural contexts. The material covered includes Realism, Impressionism, Expressionism, Art Nouveau, Bauhaus, and early avant-gardes such as Futurism, Dada and Surrealism. These are considered against the backdrop of industrialisation, technological transformations, colonization, international conflicts and totalitarian regimes.

SAHT1102

Mapping the Postmodern

School of Art History and Theory
UOC6 HPW3

This course examines major transformations in art and design practice and theory from the late 1940s to the present, and locates these within changing social, political and economic contexts. Issues relating to Formalism, Pop, image and text, the 'de-materialisation' of art, and performance are addressed, as well as Feminist theories and practice, post-colonial culture, and the new technologies.

SAHT1211

Theories of the Image

School of Art History and Theory
UOC6 HPW3

An introduction to ways of understanding and evaluating the making, reception and theoretical understandings of images in our culture. Different cultures and historical periods have treated images in radically different ways with different ways of understanding the way images relate to their producer(s), viewer(s) and to the world. There is also a philosophical concern with the nature of the image, how it is able to have meaning, to represent at all. How are we able to read images? Is it a natural process or culturally determined? These issues will be addressed by critically examining the different ways of understanding the artistic image in Western and Non-western arts, and in crucial developments in Western art history (including Renaissance perspective; the invention of photography; photo-mechanical reproduction; Modernism and abstraction; and feminist critiques).

SAHT1212

Theories of Art History and Culture

School of Art History and Theory
UOC6 HPW3

Introduces art history and cultural analysis as forms of narrative, which aim to explain and integrate cultural objects into historical or other order. Draws upon and critically assesses the key methodologies (such as connoisseurship, periodisation, formalism, iconography, historicism and historical materialism, social history, psychoanalysis, semiotics, high culture/popular culture, ethnocentrism, and feminism). These methodologies will be examined by reference to such historians as Wölfflin, Panofsky, Gombrich, Baxandall, Fry, Antal, Clark, and Pollock.

SAHT1221

Contexts for Art

School of Art History and Theory
UOC6 HPW3

The course exposes students to the different types of contemporary art exhibited locally - in public galleries, dealer galleries, contemporary art spaces, artist run initiatives, community centres and non-art spaces such as shopping malls. Designed to reflect the diversity both of art and the institutions through which it is viewed, this subject is structured around an examination of works in situ. Students are encouraged to engage with work in relation to specific contexts, to consider issues of taste and value and how these are mediated by place and modes of display.

SAHT1222

The Production of Art

School of Art History and Theory
UOC6 HPW3

The emphasis in this course is on a behind the scenes exposition of art. It looks critically at the processes by which visual art is made available to viewing publics. These processes take into account a range of concerns (practical, strategic, ideological) that vary widely between institutions. Students are introduced to various professional art practices, through the processes of curating, managing, catalogue writing and production, exhibition display and handling of works. The infrastructure of the art industry, including the administration of State Museums and other art organisations, such as funding bodies, are presented as a subject for practical purposes, as well as critical consideration.

SAHT1301

Design History, Theory and Aesthetics 1

School of Art History and Theory
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an overview of design history from the early modern period through to Postmodernism. The theories and strategies employed by industrialists, designers, philosophers and artist/designers will be explored. An understanding of elements and principles of design, and the role that design plays in the evolution of market systems along with its emergence as a powerful tool for national and cultural identity will be investigated. Key moments in design history - designers, movements, innovations etc. - are considered against the backdrop of industrialisation, technological transformations, colonisation and international conflicts. The theories, practices, aesthetics, cultural and economic considerations employed by 20th Century designers will be explored both from a formal elements and principles base and a socio-political standpoint. Within these parameters 20th Century design movements, styles, manufacturers and retailing will be considered to assist students to understand the designer's role in society as well as to provide a context for the analysis of their designs.

SAHT2211

Eurocentric Visions: Grand Narratives in Western Art

School of Art History and Theory
UOC6 HPW3

To tell progressive stories about Western art, grand narratives were constructed. In these grand narratives, as this course reveals, Eurocentric and ethnocentric historical material was ordered into stories about Western nations becoming more and more civilised as signified by the development of perspective, the Classical canon, landscape and cityscape, portraiture and the nude from Ancient Greece to Modernism. Positioned as peripheral to this evolution or merely a sub-text to these grand narratives, Non-Western art, particularly that of Islam, was either excluded or misrepresented as uncivilised, regressive and barbaric. Issues of cultural difference capable of disrupting the seamless flow of Western art's evolution, such as gender relations, sexualities, ethnicities, nationhood, diaspora, work, patronage and money, criminality and disease, were disavowed. To deconstruct these grand narratives, this course will use these exclusions and denials as its tools. Drawing upon interdisciplinary models for reconstructing history provided by Michel Foucault, Edward Said, Jonathan Crary and Abigail Solomon-Godeau, amongst others, it will explore how to rewrite histories of art in relation to non-western art, homoeroticism, manhood and the 'heterosexual imperative', prostitution and 'the venereal peril', health, disability and hysteria, the alienated and displaced, the 'orientalised other', the nuclear family and 'docile bodies'.

SAHT2212**Art and Cultural Difference**

School of Art History and Theory
UOC6 HPW3

The conceptualisation of difference, diversity and multiplicity, both within and across cultural boundaries, has occupied a central position in the historical trajectory of Art, particularly since the end of World War II and the advent of a variety of neo and postcolonialisms. Topics covered include the relationship of theories of ethnicity, gender, race, class, culture, knowledge and power to the complex history and practices of art. These will be addressed by critically examining Adorno, Benjamin, Freud, Irigaray and Marx, and theorists and artists of colonial struggle such as Kahlo, Rivera, Sartre and Fanon. The implications for art of such contemporary issues as multiculturalism will also be included.

SAHT2213**Memory and Self**

School of Art History and Theory
UOC6 HPW3

This course traces contemporary ideas of body and subjectivity through the work of a range of artists and writers. Its major focus is on the experience of memory and self-understanding. It addresses the questions of how memory is constituted and how it is crucial to our sense of self; how memory affects our relations to images and objects, and how memory is represented. Themes include: horror and humour, gesture, performativity and mimesis. Contemporary art and writing practices will be used as the basis for a creative engagement with theoretical ideas.

SAHT2214**Approaches to Australian Art**

School of Art History and Theory
UOC6 HPW3

This course introduces some of the preoccupations of Australian art in the years since colonisation. Issues to be discussed include: the notion of the artist as a recorder in the 19th century and a tourist in the 20th; the search for a 'Great' Australian artist; national identity and art; links between art and commerce; the idea of 'modern' in an Australian context; and attempts to place Australian art in an international context.

SAHT2218**Theories of the Digital**

School of Art History and Theory
UOC6 HPW3

Excluded: 4810 Bachelor of Digital Media students.

This subject explores theoretical frameworks within which the content, meaning, aesthetics and impact of digital and new media practice can be critically analysed and evaluated. Topics covered include metaphors of convergence and divergence that structure digital media and aesthetic production; interfaces (particularly the interface between the body and technology), theories of the real, virtuality, materiality and immateriality, and concepts of post-media and software aesthetics. Experimental, innovative and conceptually sophisticated practitioners and current critical debates and theories relating to digital media are considered.

SAHT2221**Writing for Art and Design**

School of Art History and Theory
UOC6 HPW3

This course examines different genres of writing on the visual arts, with an emphasis on contemporary practices. Newspaper reviews, journal criticism, scholarly catalogue essays, in house catalogue notes, coffee table art books and collaborative works between artists and writers are studied in terms of their connections to other genres of writing (for example journalistic, fictional narrative, descriptive prose). The course looks at these writings within specific cultural fields and their assumed sets of values. It also demonstrates how such categories play an active role in the shaping and production of meanings in art. Students also become participants in the writing, editing and design of the School of Art Theory's magazine, *Artwrite*.

SAHT2222**Methods of Research and Writing on Art and Design**

School of Art History and Theory
UOC6 HPW3

This course is primarily concerned with the teaching of skills necessary to conduct specific research projects. The focus is on methods of researching primary material as well as locating archival documentation, in order to

evaluate and effectively utilise different forms of visual and theoretical evidence for research projects. Topics include field work methods, such as oral history, together with knowledge of indexing procedures, statistical analysis and the utilisation of computer resources, as well as critical methodologies for appraising research material. The course also includes topics to address the logical construction of a valid argument, the rhetorical promises of different genres of writing and the delineation of ideas.

SAHT2223**Modern Art and French Imperialism**

School of Art History and Theory
UOC6 HPW3

When Paris was invaded by Nazi troops, the art writer Harold Rosenberg reminisced how it had once been "the Holy Place of our time. The only one.". Until then, a Modern Art market had flourished in Paris, unsurpassed in scale and complexity by any other nation. It was actively supported by the French Third Republic. Whilst encouraging artists worldwide to come to Paris, it also encouraged international collectors to acquire Modern Art made in France. At the same time, the Republic also bought artwork for transmission to French provinces and colonies in its ethnocentric conviction that those at the 'peripheries' would become "civilized" by this "mission". This course will explore how Paris evolved as a unique field of cultural production through the network of institutional interrelationships forged between the French State, Paris Salons, art dealers and patrons. It will examine the huge number and national diversity of artists from Rupert Bunny and Marie Vassiliev to Pablo Picasso, who flocked from cities as geographically diverse as Sydney, St. Petersburg and Barcelona to this Modern Art Centre. By charting the dissemination of acquisitions, it will reveal how cultural imperialist strategies deployed by America during the Cold War, were alive and well in twentieth-century France.

SAHT2224**Art and Biogenetics: Breeding the Body Beautiful**

School of Art History and Theory
UOC6 HPW3

When Eugenic Sterilisation became law in the Third Reich, American, Australian, European and British Eugenic Societies immediately congratulated Hitler. He, in turn, commended their eugenic policies and acknowledged them as his precedent. Far from being an isolatable phenomenon, this course will then reveal why Nazi eugenics may be perceived as the extreme realisation of a biogenetic culture that flourished worldwide. By examining images and exhibitions of the body beautiful, alongside those of degeneracy, it will explore different ways in which art propelled the quest for genetic perfection. Through an investigation of the artwork of such critical Modernists as Marcel Duchamp, it will expose ways in which art was also able to parody this quest.

SAHT2225**Decadents, Dissidents, and Degenerates: Fin-de-Siecle Symbolism to Nazi Degenerate Art Exhibitions**

School of Art History and Theory
UOC6 HPW3

Before the Third Reich came to power, Adolf Hitler vowed to unleash 'a thunderbolt against degenerate art' as epitomized by Symbolism, Cubism, Futurism, Expressionism, Dadaism and Surrealism. Once he was Chancellor, Hitler commanded President of the Third Reich's Chamber of Art, Adolf Ziegler, to extract 16,000 'degenerate' artworks from German museums. Before being sold or burnt, they were exhibited in Degenerate Art Exhibitions designed to expose this art as pathological in their words, 'the product of sick minds and bodies'. Yet the Third Reich was by no means the first to conflate 'degeneracy' with dissonant Modernism. Its genealogy was spawned when Darwinism became a dominant discourse in Western nations seventy years earlier and any sign of deviation from 'normalcy' signified the threat of racial extinction. Its best-known theorist was Max Nordau who, aghast at images of bodily distortion and sexual transgression, declared that "degenerates are not always criminals, prostitutes, anarchists, and pronounced lunatics", but "decadent authors and artists". Starting with such Symbolist painters such as Gustave Moreau, and writers such as Huysmans (author of 'Against Nature'), this course will investigate the relationship of self-proclaimed 'decadents' to the new aetiologies of neurology and sexology, the diagnosis of such disorders as hysteria and neurosthenia, as well as the new practice of psychoanalysis. It will examine their linkage with such twentieth-century dissidents as Knopff, Munch, Nolde, Ibsen, Alfred Jarry, Gauguin, Picasso, Kees Van Dongen, Kirchner, Picabia, Duchamp, Max Ernst, Sonia Delaunay, Hannah Höch, Suzanne Valadon and Meret

Oppenheim, to examine why those artists, who featured so prominently in Nazi Decadent Art Exhibitions, were long derided elsewhere as decadent, dissident and degenerate.

SAHT2227

Fashion History and Theory

School of Art History and Theory

UOC6 HPW3

The course examines the history of Western fashion from the Middle Ages to the present day. Methodologies employed include those of art history, cultural and media studies, anthropology, history, and economic history. Theories of gender, sexuality and the politics of identity will be emphasised. The social and economic histories of making and consuming clothes and the relationship of dress to the body, and to urban and domestic space, which will provide a focus for the course. Topics to be studied include Elizabethan court dress, representation and politics, the 18th-century consumer revolution, the rise of the dictator-designer within modernism, and post-modern dressing.

SAHT2301

Design History, Theory and Aesthetics 2

School of Art History and Theory

UOC6 HPW3

Prerequisite: SAHT1301

This course reflects upon histories, theories and practices in the realm of design in order to provide an analytical framework for understanding present and future design from the designer's viewpoint. Within this context a variety of themes and issues will be analysed in relation to; the "designer" product, the designer's role in society, designer education, the designer and mass production and consumption. This course through further reflection on historical and contemporary theories and practices in design, will address such specific issues as packaging, marketing and retailing of designed products as well as aspects of consumer psychology. The communication qualities inherent in design products, graphics and environments will be considered in some depth.

SAHT2601

The Art of Ancient Cultures: Assyria, Mesopotamia, Egypt, Persia, Greece & Rome

School of Art History and Theory

UOC6 HPW3

How do we 'read' objects and images from cultures that lived thousands of years ago? What methods can we use to enhance our appreciation and understanding of ancient artefacts? With knowledge and understanding increasing with every new discovery, where does this leave Prehistory? These and other commonly asked questions will be answered in this course, which provides an historical, cultural and theoretical study of the Ancient world through examining a variety of objects and images. This will include presentation of a range of thematic studies that examine the arts of the Ancient world including the role of jewellery, body ornament and clothing towards defining gender, status and wealth. A cultural decoding of the symbolic messages contained within ancient ornament and decoration will be presented from a variety of perspectives. The culture of death (including burials, rituals and ceremonies) and the artefacts associated with this, will be examined. The course will also include a discussion of a variety of objects and images that portray the history of theatre, sport and other forms of entertainment.

SAHT2605

The Avant-Garde and the Academy, the Politics of Colonialism and

School of Art History and Theory

UOC4 HPW2

Following Napoleon's blaze of European and colonial conquests and his downfall, a waning of revolutionary fervour marked early 19th century reaction in Europe, in which church, monarchy and such authoritarian institutions as The Academy for Arts became reactivated, but subsequently contested. The schism between Neoclassicism and Romanticism, concepts of art-for-art's-sake, oppositions to academic art, the rise of Orientalism, the emergence of photography and formations of an avant-garde are issues which will be examined in this context, through such artists as Ingres, Canova, Goya, Turner, Daumier and Delacroix.

SAHT2606

The Painting of Modern Life: French and English Painting in Focus

School of Art History and Theory

UOC6 HPW3

This course focuses on Realist and Impressionist painting in the second half of the nineteenth century in France and England. The work is considered within changing social, political and cultural contexts, with special attention paid to its critical reception in reviews and cartoons. Questions to do with gender, class, sexuality, labour and leisure are examined in relation to such well known artists as Courbet, Manet, Morisot, Degas, Holman Hunt and Ford Madox Brown, as well as lesser known figures including Augustus Egg, Luke Fildes and Francois Salle.

SAHT2612

Art and its Others: Interdisciplinarity in Contemporary Art

School of Art History and Theory

UOC6 HPW3

This course examines interdisciplinarity as a major trend in post sixties and contemporary visual art. It studies international and Australian art from the sixties to the present that interfaces with other cultural fields, including design, architecture, science, environment and pornography. The course interrogates the historical and theoretical implications of visual art's increased dialogue with other disciplines.

SAHT2633

Peripheral Visions: Perspectives of Colonial and Post-Colonial Art

School of Art History and Theory

UOC6 HPW3

This course will investigate the effects of the spread of Euro-American modernism through the so-called Third World during the 20th century and particularly during the period following World War II. It will analyse the ways in which different cultures selectively adopt and transform aspects of various modernist styles and the ways in which these styles are incorporated into indigenous visual practice. It will examine such matters as the relationship between economic imperialism and cultural production, the transition from colonialism to postcolonialism, the effects of tourism and the value of 'decentred' postmodern modes of understanding in a Third World context. Art of the Asia-Pacific region, Africa and Latin America will be addressed. Some general knowledge of the evolution of modern and postmodern art will be assumed.

SAHT2641

Modern Aesthetics: From the Enlightenment to the 21st Century

School of Art History and Theory

UOC6 HPW3

This course introduces students to key critical philosophies of modern aesthetics from the 18th Century to the present. Specifically, it examines the relevance of aesthetic theories of Kant, Hegel, the German Romantics, Nietzsche, Lyotard, Derrida, psychoanalysis and marxism to new modes of perceptual and affective experience associated with postmodernity. Themes investigated include debates between formal and historical aesthetic theories; the revival of aesthetic theory in the visual arts in recent decades; responses to the spectacular image culture of postmodernity; and the relationship between aesthetics and ethics. The course addresses how key currents of modern aesthetic theory might be applied and revised in light of contemporary social and cultural conditions.

SAHT2642

Art, Gender, Sexuality and the Body

School of Art History and Theory

UOC6 HPW3

This course concentrates on art after 1960 which deals with issues of gender, sexuality and the body. The course will start with postminimalism, performance and body art. It examines the rise of women's art in the 1960s and 70s, the first art to self-consciously attempt to represent gender difference, and will track the shifting concerns and debates in art about the body, gender and sexuality from then until now. This period coincides with an explosion of feminist theory and the widening of feminist debates to include questions of sexuality, race and ethnicity. The course will explore the particular ways in which these debates are refracted through art practice and art history. Key questions to be explored in the course include: Is there a feminine aesthetic? Is the depiction of the body linked to essentialism? Is masculinity the new dark continent? How can the body be used as an expressive medium? How does art practice relate to both identity formation and fantasy? Topics to be covered include: the rise of body art; performance and masochism; identity and essentialism; postmodern irony; female and male masquerade; queer and gay art; and the rise of bad girl and bad boy art in the 1990s.

SAHT2643**Pornography, Art and Politics**

School of Art History and Theory
UOC6 HPW3

This course will explore the boundary between art and pornography and the social function of that boundary in western society. It will look at the ways in which bodies are eroticised and/or designated as 'pornographic' or perverse. Concepts such as fetishization, voyeurism, sadism and masochism will be discussed in relation to art history and contemporary art practice. The politics of pornography will be debated in relation to such issues as gender/feminism, child sexuality, censorship and AIDS.

SAHT2644**Psychoanalysis and Art**

School of Art History and Theory
UOC6 HPW3

Psychoanalysis is a key approach to the study of art and visual culture. This course will consider the work of the founder of psychoanalysis, Sigmund Freud and three of the main streams of contemporary psychoanalysis his work has spawned: object relations, Kleinian and French Freudianism (Lacan, Kristeva). It will also examine an emerging area of research: affect theory. The course will examine the key concepts from psychoanalysis that have been applied to the analysis of art, such as: dreams and primary processes, sublimation, the uncanny, the fetish and abjection. Each week we will read a key psychoanalytic text and then consider what it illuminates about the nature of art in general, or specific works of art. The aims of this course are to examine how psychoanalysis is used to interpret: the function of art, the origins of vision and creativity, and the unconscious processes that works of art deploy or activate.

SAHT2661**Experimental Film and Video since the 1960s**

School of Art History and Theory
UOC6 HPW3

This screenings course will offer an overview of experimental film and video from the 1960s to the present, incorporating international and Australasian practices. It examines neo avant-garde practices and theories of the 1960s and 1970s, as well as film and video art of recent decades. The course addresses the history and significance of the current proliferation of the moving image in the international art world and examines the impact of new technologies.

SAHT2663**Avant-Garde Cinema: 1900-1950**

School of Art History and Theory
UOC6 HPW3

This screenings course will survey avant-garde cinema of the first half of the Twentieth Century. It will include historical and theoretical examination of Abstract Cinema, Dada and Surrealist film, Soviet Cinema, German Expressionism, Impressionist film, and avant-garde film of the U.S. The course will give students grounding in the early history of avant-garde cinema, framed by key film theories.

SAHT2667**After Modern Sculpture: Installation, Structures and Space**

School of Art History and Theory
UOC6 HPW3

This course examines the radical changes in sculptural practices from the mid-1960s to the present. Movements to be analysed include: Fluxus, Arte Povera, Minimalism, Land Art, Postmodernism, and emerging trends such as Designer-Artists (Jorge Pardo, Andrea Zittel). Particular attention will be given to the emergence of installation art and the questioning of the integrity of the art object. The course aims are: to trace and examine the historical and philosophical understandings of late modern, postmodern and contemporary spatial and sculptural practices; to consider how these practices relate to conceptions of time, space and subjectivity and; to examine two recurrent themes in the discussion of installation: the total work of art and the spectacle.

SAHT2676**Art, Technology and New Media**

School of Art History and Theory
UOC4 HPW2

This course explores the ways in which artists have responded to developments in technology and new media. A range of practices are examined from digital media to holography to techno-performance. In addition to investigating the work of specific artists, the subject investigates

the ways in which museums and galleries are responding to the demands of new media and developing new strategies of presentation. The course will also introduce a range of theoretical work on new media and on virtual reality. In particular it will debate the nature of virtual experience, examining the temporal and spatial implications of operating within a virtual environment. The course incorporates a certain amount of hands-on experience and also demonstrations of artist's work.

SAHT2677**Time-Based Art: Histories and Themes**

School of Art History and Theory
UOC4 HPW2

This course will look at changing notions of identity, time and space, cultural production and media brought about by our engagement with networked, nonlinear communications. At a conceptual level it will look at new theories of complexity and connectivity, globalisation and the information society. There will be an emphasis on how net communication, art and design have changed our relation to time-based media. Students will be asked to locate and research aspects of net culture such as virtual worlds and to look at new forms of animation used online. Particular attention will be paid to how artistic practices and productions have developed through networked cultures and to the growing genre of net art.

At a practical level, students can expect to develop research and network communication skills by taking this course. The course will focus on an engagement with net structures such as search engines, hypertext, databases, flash animation and basic web design. It is envisaged that the course will trial and develop several online teaching facilities such as a chronologically web log or 'blog' that experiments with time in online spaces.

SAHT3211**Art After Postmodernism**

School of Art History and Theory
UOC6 HPW3

Excluded: SAHT3105.

This course will re-examine a number of theoretical approaches to the understanding of images and objects that have been addressed during the course. These approaches will be applied to a range of artworks produced in Australia and internationally over the last decade or so. It will offer an overview of many of the contemporary developments, themes and issues that have concerned artists in the period up to and beyond postmodernism. Issues to be considered include: how objects and images come to have meaning; the ways in which artworks differ from other objects; the relations between language and visual images; the ways images and objects can be seen and the sort of viewer(s) they imply; the different forms of perceptual address that we bring to artworks, including visual, tactile and kinaesthetic; and the significance of art images and objects in relation to the politics of information dissemination, gender, postcolonialism, class and ethnicity.

SAHT3212**Art and Everyday Life**

School of Art History and Theory
UOC6 HPW3

This course examines the major structures and ways of thinking which have both constituted and transformed the practices of art and criticism and evaluation of art in an era characterised by the pervasiveness of mass media and the aestheticisation of everyday life. The course explores the forms and significance of popular culture in the 20th century, focussing on such phenomena as consumerism, mass media, TV and advertising, subcultures, the city and the suburb. The interdisciplinary development of cultural studies provides tools for reading artistic strategies in the light of television, film, computer imaging, the popular press and advertising. The work of theorists such as Jean Baudrillard, Michel de Certeau and Meaghan Morris is applied to these areas and critically examined.

SAHT3213**Museum Studies: Exhibitions, Collections and Material Culture**

School of Art History and Theory
UOC6 HPW3

This course reviews theoretical frameworks and current research on museums and art museums. It examines the history of collecting and exhibiting, and the museum as an institution. Taking the new museology as its theoretical starting point, it considers the cultural role of museums. It compliments the practical emphasis of the professional contexts strand within the core of the BArtTh by exploring critical theoretical approaches

to museum culture. Its emphasis is on material culture, objects, artworks and curatorship in the contexts of collections and exhibitions.

SAHT3214

Research Project

School of Art History and Theory
UOC6 HPW3

This course provides an opportunity for students to complete a sustained piece of research and to develop their skills of independent writing and research. Students can choose to research a topic concerned with either a particular artist, art writer, art historian or philosopher, an institution or particular issue, such as modernity, nationalism, orientalism or gender. Students must then, under the supervision of the assigned academic staff, conduct independent archival and field research. The writing of a 6,000 word paper on the basis of this research will allow the development of such key research practices as cohesive methodology, critical evaluation and classification of research material, valid argumentation and writing skills, as well as speculation and a clear delineation of ideas. This course is recommended for students who are considering undertaking Honours.

SAHT3221

Contexts, Professions and Practices

School of Art History and Theory
UOC6 HPW3

This course orients students towards professional practice in arts administration, curatorship, writing and other arts-related professions. Students will critically consider the professionalisation of the arts, and the notion of the arts and cultural industries. They will investigate the nature of employment and practice, drawing on theoretical and case study approaches. They will examine the idea of professional skills, and have the opportunity to practise some skills and knowledge-based tasks, such as developing exhibition and funding proposals, preparing budgets and reports, developing marketing and promotion strategies, preparing education and/or public programs, and seeking sponsorships. The aims of the course are to prepare students for the Industry Placement, to help clarify career goals, to give students an understanding of professional practice and to ensure that they develop the confidence in their preparation for working in the arts.

SAHT3301

Design History, Theory and Aesthetics 3

School of Art History and Theory
UOC6 HPW3
Prerequisite: SAHT2301

Through reference to philosophers and scholars whose theories underpin historical and contemporary design practice, students will be encouraged to conceptualise and develop their own design philosophy. A number of specific design examples will be analysed in order to highlight the influence various theories of aesthetics and function has had on the design domain.

SAHT3613

Digital Theory and Aesthetics

School of Art History and Theory
UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

This subject explores theoretical frameworks within which the content, meaning, aesthetics and impact of digital media practice can be critically analysed and evaluated. Topics covered include rhizomic organisation of thought, temporality; interfaces (particularly the interface between the body and technology) and theories of the real, virtuality, materiality and immateriality. Experimental, innovative and conceptually sophisticated practitioners and current critical debates and theories relating to digital media are considered.

SAHT3614

Screen Culture

School of Art History and Theory
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Information and screen culture is central to the shaping of the political and economic structures and cultural experience of contemporary global society. The impact of screen culture is pervasive and deeply integrated into everyday life and yet digital media are also capable of generating and communicating complex and highly critical cultural insights. Topics covered in this subject include authorship, virtual communities,

utopianism, cyberculture, gaming, interactivity, privacy, censorship and intellectual property. Social responsibility and ethical action in digital media practice is explored through a critical understanding of the significance and impact of screen culture.

SAHT3669

Critical Theories of Photography

School of Art History and Theory
UOC6 HPW3

This course will critically examine the major ways in which photography has been theorised. Semiotic and post structuralist approaches to the photographic medium will receive particular attention. Other areas covered include realist theories of photography, aesthetic and contextualist approaches, and theories about the impact of digital technologies on the photographic image. The theories studied in the course will be applied to historical and contemporary examples of photographic practice.

SAHT3690

Special Project

School of Art History and Theory
UOC6 HPW3

From time to time, one-off opportunities arise for the College to offer special programs of study for credit. For example, supervised international experiences (such as study tours, exhibition participation or attendance, or special projects). This course is intended to facilitate the College in developing its educational program for undergraduate students by incorporating such opportunities into the academic program. Specific course outlines will be distributed detailing the academic content, objectives, assessment tasks and criteria, modes of teaching and learning, expectations and requirements of student participation. Please note that there may be costs involved (such as costs associated with travel, accommodation, meals and museum visits) in taking this course.

SAHT4211

Thesis A

School of Art History and Theory
UOC12 HPW0

This course comprises the first semester's research and writing which will lead, in Session 2, to the completion of a research thesis of 15-18,000 words, or equivalent research project (for example, in curatorship), on an approved topic. Students are expected to consult with the Honours Co-ordinator in February about their topics. A supervisor will be assigned no later than mid-March, when work on the thesis should commence. Students attend and contribute to Thesis Seminars and such presentations and seminars as required. Satisfactory participation in the Thesis Seminar and presentations is a requirement of the successful completion of Thesis A. Thesis A is a prerequisite for completion of Thesis B.

SAHT4212

Honours Seminar

School of Art History and Theory
UOC6 HPW3
Corequisite: SAHT4211 Thesis A.

The Honours seminar course is to be taken in the first session of Honours enrolment. It complements the Honour Thesis subject. The course is designed to enhance skills in research and writing necessary for the preparation of an honours thesis in art history and theory. Topics addressed include: refining a research topic, writing an abstract, exegetical and analytical skills, visual analysis and thesis structure.

SAHT4213

Thesis B

School of Art History and Theory
UOC24 HPW0
Prerequisite: SAHT4211 Thesis A.

Thesis B follows on from Thesis A and is the completion of a research thesis of 15-18,000 words, or equivalent research project (for example, in curatorship), on an approved topic. Students attend occasional intensive workshops and seminar presentations as required.

SART1301

Introductory Studies: Drawing & Painting

School of Art
UOC6 HPW3

This course will introduce students to the basic relationships between drawing and painting. Through a series of projects, incorporating the study of line, tone, colour, proportion, composition and the use of media,

students will be encouraged to explore creative possibilities of these areas in order to make an informed choice of core studies for sessions 2-6.

SART1302

Introductory Studies: Sculpture & Time Based Art

School of Art
UOC6 HPW3

This studio based course introduces the student to the broad experience of working with sculpture focusing on installation, object, performance and with time based art focusing on sound, video, performance. Emphasis is on the development of a keen critical awareness by looking at the content and context of contemporary art and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language and allow them to make an informed choice of core studies.

SART1303

Introductory Studies: Photomedia & Printmaking

School of Art
UOC6 HPW3

This studio based course introduces the student to the broad experience of working with photomedia and printmaking focusing on image and object. Emphasis is on the development of a keen critical awareness by looking at the content and context of contemporary art and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language and allow them to make an informed choice of core studies for sessions 2-6.

SART1305

Drawing/Painting 1B

School of Art
UOC6 HPW3

This course will assist students to develop and extend the basic concepts and skills in drawing and painting. Students will be encouraged to understand both the inter-relationship of form and content and the creative possibilities of various media and technologies. The importance of analytical observation will be emphasised along with investigations into composition, design and colour. Students will be expected to attain a basic competence in drawing and painting by the end of the session.

SART1306

Printmaking 1B

School of Art
UOC6 HPW3

This course will introduce students to basic concepts and skills in printmaking, developing a firm conceptual base from which they will expand in their continuing studies in the discipline. Students will be encouraged to understand the inter-relationships of form and content and the creative possibilities of various media. In line with current art practice expression is encouraged through the use of traditional and contemporary print media including etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. Students will be expected to attain a basic competence in printmaking by the end of session. Studio health and safety and the appropriate handling and presentation of printworks will be covered.

SART1307

Sculpture/Performance/Installation 1B

School of Art
UOC6 HPW3

This is a studio based course that provides a range of practical skills and processes along side an awareness of sculptural language, such as metaphor, narrative, symbolism and quotation. A range of media and processes are explored, as well as practical inductions and teaching of manipulative skills in a variety of materials. The course focuses on current sculptural practice including work sited on, or derived from the body, the encoded object, installation, and work devolving from an awareness of time, materials and processes. Aesthetic considerations such as scale, materiality, duration, mass, placement are analysed, towards developing increased sensitivity and perceptual awareness.

SART1311

Drawing/Painting 1A

School of Art
UOC6 HPW3

Prerequisite: SART1301 Introductory Studies: Drawing & Painting.

This course will assist students to develop and extend basic concepts and skills in drawing and painting. Students will be encouraged to understand both the inter-relationship of form and content and the creative possibilities of various media. The importance of analytical observation will be emphasised along with investigations into historical precedents and conventions. Students will be expected to attain a basic competence in drawing and painting by the end of the session.

SART1313

Printmaking 1A

School of Art
UOC6 HPW3

Prerequisite: SART1303 Introductory Studies: Photomedia & Printmaking.

This course will introduce students to basic concepts and skills in printmaking, developing a firm conceptual base from which they will expand in their continuing studies in the discipline. Students will be encouraged to understand both the inter-relationships of form and content and the creative possibilities of various media. In line with current art practice expression is encouraged through the use of traditional and contemporary print media. The importance of analytical observation will be emphasised. Students will be expected to attain a basic competence in printmaking by the end of session.

SART1314

Sculpture/Performance/Installation 1A

School of Art
UOC6 HPW3

Prerequisite: SART1302 Introductory Studies: Sculpture & Time Based Art.

This studio based course provides the basic foundations for sculptural studies through a series of projects that are a trajectory into the students' personal creative enquiries. The projects foster a relation between concept to process, and intention to outcomes. Critical awareness and interpretive skills are developed along with an understanding of basic sculptural languages such as metaphor, narrative, metonymy, space, materiality, form, mass and scale. The interdisciplinary nature of contemporary sculptural practice is emphasised and includes a diversity of experiences such as producing works using time, light, installation, sound, collaboration and performance, as well as exploratory applications of traditional forms and methodologies.

SART1361

Etching

School of Art
UOC6 HPW3

This course provides an introduction to the basic principles and techniques of intaglio printing, including etching, drypoint and engraving. Through investigation and selection students will develop an understanding of the technical means and aesthetic qualities of the original print. Students will attain a level of competence in intaglio processes and develop their potential as creative artists in the printmaking medium as well as investigate the historical precedents of the discipline.

SART1401

Foundation Studies: Draw/Paint/Print (BArtEd)

School of Art
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course will introduce students to a dynamic studio methodology that integrates the theory and practice of the visual arts and provides a basic overview of its current and historical contexts. The focus of this course will be on the use of drawing as a platform for interdisciplinary artwork in other 2 dimensional forms. Through sustained inquiry, students will have the opportunity to be critical, inventive and experimental in their approach. An emphasis is placed on the student's own developing practice.

SART1402

Foundation Studies: Sculpt/Photo/Time (BArtEd)

School of Art
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces three-dimensional, and photo-media based art practices by engaging students in a series of structured projects to encourage individual exploration and expression. The focus of the course

is to extend existing two dimensional skills into the areas of sculpture and still and moving photography. Through sustained inquiry, students will have the opportunity to be critical, inventive and experimental in their approach. These studies will expand the range of critical and practical skills through which the student may develop a personal visual language and ideas whilst further developing their own art practice.

SART1501

Painting

School of Art
UOC6 HPW3

The aim of this course is to enable the student to develop skills and an intuitive awareness of aesthetic values in painting so that the student can use the discipline of painting as a means of individual artistic expression. The student will explore theoretical concepts and develop relevant skills as a basis for making paintings. The student will undertake projects aimed at encouraging an individual, creative and professional approach to painting.

SART1502

Drawing

School of Art
UOC6 HPW3

This course will enable students to develop a command of drawing as a visual arts discipline and to relate the art of drawing to other areas of creative endeavour. The student will explore various aspects of drawing and develop competence and confidence in drawing. The student will undertake exercises which will emphasise drawing as a means of creative expression, and also as a tool of research in the visual arts.

SART1581

Screen Printing

School of Art
UOC6 HPW3

This course aims to introduce the student to all techniques involved in screen printing. Through investigation and selection students will develop an understanding of the technical means and aesthetic qualities of the original print. Students will investigate the historical precedents of these processes in the context of art practices. These courses will deal with skills and techniques, experimental approaches, the relationship between the technical and aesthetic properties of prints and the ability to assess the results of one's own work.

SART1591

Printmaking

School of Art
UOC6 HPW3

In line with current art practice, expression is encouraged through the use of traditional and contemporary print media to be chosen (dependant upon availability) from the range of etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. The aim of this course is to enable the student, by application of theory and developed skills, to create print-based works in both two and three dimensions. The student will undertake projects, either as separate entities or combined in installed pieces, aimed at encouraging an individual, creative and professional approach to printmaking.

SART1601

Sculpture

School of Art
UOC6 HPW3

Through a program of practical studio projects, students will experiment with sculptural methods, ideas, techniques and mediums to develop a series of works. Through studio practice, group discussion and individual tutorials, students will consider aesthetic, conceptual, technical and material factors towards the fabrication of these works. The projects will introduce students to a variety of approaches that are characteristic of the breadth of contemporary art practice. Pertinent research and a studio theory project will broaden the student's appreciation of contemporary sculpture will also support the student's art practice.

SART1606

Drawing for Media

School of Art
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Various drawing media will be introduced to the student and their applications and use explored. This course aims at making the student proficient in the depiction and understanding of line, space, volume and proportion, using a variety of different media. The fundamentals of drawing taught in this unit will be orientated towards its use as a tool in the solving of creative problems. This subject encourages the use of drawing, perspective, and the projection systems, as elements in the manipulation and creation of space on the two dimensional format, and analysis and clarification of tasks and concepts.

SART1621

Installation

School of Art
UOC6 HPW3

This course provides the opportunity to explore the various forms and disciplines three-dimensional activity can take in contemporary art practice. This course is designed to allow flexibility for both multimedia experimentation and specialisation in the exploration of the construction, installations and spaces as an expressive vehicle. This course is studio based with an emphasis on the critical analysis of research, experiential learning and conceptual development. This discussion is centred around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2320

Drawing/Painting 2A

School of Art
UOC6 HPW3

Prerequisite: SART1311 or SART1401.

In this course, students will begin the investigation and imaginative interpretation of conventions of the disciplines of drawing and painting. In consultation with lecturers, students will examine and begin to develop a program of studio studies which demonstrate an understanding of contemporary and historical pictorial theories.

SART2322

Printmaking 2A

School of Art
UOC6 HPW3

Prerequisite: SART1313 or SART1401

In this course students will investigate and imaginatively interpret the significant concepts and conventions of the disciplines within printmaking. In consultation with lecturers, students will begin to develop a program of printmaking studies which reflects their individual focus within the printmaking discipline. Students will be encouraged to develop concepts relating to the characteristics of specific media in the context of contemporary practice.

SART2323

Sculpture/Performance/Installation 2A

School of Art
UOC6 HPW3

Prerequisite: SART1314 or SART1402

This studio based course supports the development of the individual student's sculptural ideas and through seminars, tutorials and critical evaluation, broadens the students' awareness of related issues in contemporary thought, sculptural theory and practice, and diverse areas of concern in the social and cultural environment. Students may choose to produce divergent or interdisciplinary works such as, site specific, temporal, ephemeral or performative installations, or develop particular sculptural forms such as object making or body works. The emphasis at this stage is on an open-ended, exploratory investigation of sculptural language, the stimulation of the imagination, and the development of creative ideas and rigorous studio methodologies through challenging project work. This process is supported by the acquisition of skills pertinent to the students' needs, including the presentation of projects, field work, studio theory and documentation of completed works.

SART2330

Drawing/Painting 3A

School of Art
UOC6 HPW3

Prerequisite: SART2320

In this course students will investigate and imaginatively interpret concepts relevant to the disciplines of drawing and painting. In consultation with lecturers students will develop a program of studio studies which reflect

their individual interests and enable them to view their work in relation to both art history and contemporary developments.

SART2332

Printmaking 3A

School of Art
UOC6 HPW3

Prerequisite: SART2322

In this course students will continue to investigate and imaginatively interpret the significant concepts and conventions of the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their individual interests and which may be built upon and expanded in subsequent sessions. Students will be encouraged to develop concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART2333

Sculpture/Performance/Installation 3A

School of Art
UOC6 HPW3

Prerequisite: SART2323

This studio based course continues to support the development of the individual student's sculptural ideas and through seminars, tutorials and critical evaluation, broadens the student's awareness of related issues in contemporary thought, sculptural theory and practice, and diverse areas of concern in the social and cultural environment. Students may choose to produce interdisciplinary works such as spatial, temporal, ephemeral or performative installations, or develop particular sculptural forms related to object making or works related to the body. The emphasis is on the transition from a reliance on set projects towards self initiated project work in consultation with lecturers. The representation of the students' ideas and studio methodologies are supported by the continued acquisition of skills pertinent to their needs, including the presentation of projects, field work, studio theory and the documentation of completed works.

SART2340

Drawing/Painting 2B

School of Art
UOC6 HPW3

In this course students will begin the investigation and imaginative interpretation of conventions of the disciplines of drawing and painting. Students will examine and interpret issues of space, form and structure within their emerging practice.

SART2342

Printmaking 2B

School of Art
UOC6 HPW3

In this course students will investigate conventions of the disciplines within printmaking. In consultation with lecturers, students will begin to develop a program of printmaking studies. Various media, techniques and aspects of printmaking will be examined, and students will be encouraged to develop work relating to the characteristics of specific media. Workshop procedures will be covered.

SART2343

Sculpture/Performance/Installation 2B

School of Art
UOC6 HPW3

This studio based course focuses on the students' sculptural practice, and the importance of skills acquisition, experimentation, interdisciplinary technologies, and the manipulation of materials. Practical aspects of professional practice are taught - the development of project proposals, the documentation of completed work, the formal exhibition of project work. Research skills are introduced to encourage an increased rigour in the realisation of ideas, including exploratory field work, preparatory drawing, journals, analysis and critique of work in progress and completed project work. Problem solving projects are devised to ensure a continued, lateral approach to the students' chosen areas of interest, which are addressed in self-initiated project work. Appropriate health and safety procedures are demonstrated, discussed and practised in the production of works.

SART2350

Drawing/Painting 3B

School of Art
UOC6 HPW3

In this course students will investigate and imaginatively interpret processes relevant to the disciplines of drawing and painting. Students will develop a program of studio studies which reflect their individual interests and enable them to view their work in relation to both art history and contemporary developments. Students will undertake investigations into the appropriateness of a range of media, materials and processes related to contemporary practice.

SART2352

Printmaking 3B

School of Art
UOC6 HPW3

In this course students will continue to investigate the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their individual interests and which may be built upon and expanded in subsequent sessions. Various media, techniques and aspects of printmaking will be examined, and students will be encouraged to develop concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART2353

Sculpture/Performance/Installation 3B

School of Art
UOC6 HPW3

This is a studio based course with an emphasis on an increasingly rigorous representation of ideas, and the development of a speculative studio methodology. Self initiated project work is supported by practical workshops, set project work, and excursions to generate ideas, develop a creative visual language, acquire skills, including research skills, perceptual acuity, conceptual analysis, technical proficiency, explorative problem solving. This course develops the student's documentation skills, and focuses on a considered presentation of completed works of a standard appropriate to this level of study.

SART2361

Advanced Etching

School of Art
UOC6 HPW3

Prerequisite: SART1361.

This course allows students to develop the basic principles and techniques of intaglio printing, including etching, drypoint and engraving. Through investigation and selection students will demonstrate an understanding of the technical means and aesthetic qualities of the original print. Students will attain a level of competence in a chosen process and develop their potential as creative artists in the printmaking medium in the context of contemporary practice.

SART2501

Life Painting

School of Art
UOC6 HPW3

The aim of this course is to enable students to develop a command of painting as a visual arts discipline whilst consolidating and extending previously acquired painting skills and applying these to various aspects of life painting. Students will explore those aspects of life painting which will involve an examination of the clothed form, the nude or portraiture whilst providing opportunities to work from observational, interpretive and conceptual approaches.

SART2502

Advanced Drawing

School of Art
UOC6 HPW3

The aim of this course is to enable students to develop a command of drawing as a visual arts discipline whilst consolidating and extending previously acquired drawing skills. Students will explore various strategies of drawing which provide observational, interpretive and conceptual approaches. Emphasis will be given to drawing as a means of creative expression and also as a tool of research in the visual arts.

SART2581

Advanced Screen Printing

School of Art
UOC6 HPW3

Prerequisite: SART1581.

This course aims to develop the student's emerging practice in the discipline of screen printing. Through investigation and selection students will demonstrate an understanding of the technical means and aesthetic qualities of the original print. These courses will deal with skills and techniques, experimental approaches, the relationship between the technical and aesthetic properties of prints and the ability to assess the results of one's own work in the context of contemporary practice.

SART2591

Advanced Printmaking

School of Art

UOC6 HPW3

Prerequisite: SART1591.

In this course students focus on a chosen area of traditional and contemporary print media (dependant upon availability) from the range of etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. The aim of this course is to enable the student, by application of theory and developed skills, to create print-based works of an increasingly professional standard in both two and three dimensions. The student will undertake projects, either as separate entities or combined in installed pieces, aimed at encouraging an individual, creative and professional approach to printmaking in the context of contemporary art practice.

SART2601

Advanced Sculpture

School of Art

UOC6 HPW3

Prerequisite: SART1621 or SART1601.

The aim of this course is to develop in the student the capacity to resolve aesthetic, theoretical, technical and material considerations in the creation of sculptural works. Through a program of theoretical and practical studies, students will experiment with sculptural concepts, techniques and mediums toward the resolution of original works.

SART2621

Advanced Installation

School of Art

UOC6 HPW3

Prerequisite: SART1621 or SART1601.

This course provides the opportunity to develop skills in the various forms and disciplines three-dimensional activity can take in contemporary art practice. This course is designed to allow maximum flexibility for both interdisciplinary experimentation and specialisation in the exploration of the installations and space as an expressive vehicle. This course is studio based with an emphasis on the critical analysis of research, experiential learning and conceptual development. This discussion is centred around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2818

Custom Printing

School of Art

UOC6 HPW3

This course will provide students with a valuable professional practice opportunity of engaging with a number of visiting artists in the operating of a print editioning workshop. Students will refine their technical and production skills and be exposed to professional methodology of the editioning process. Students will work with the artists and also realise a body of their own work from concept to final production. Previous printmaking skills are essential to undertake this course.

SART2819

Advanced Custom Printing

School of Art

UOC6 HPW3

Prerequisite: SART2818.

This course will further the students professional practice opportunity of continuing to engage with visiting artists in the operating of a print editioning studio. Students will perfect their technical and production skills and work within the professional methodology of the editioning process. Students will work with the artists and also realise a body of their own work from concept to final production to the highest professional standards.

SART2827

Sculpture Field Studies

School of Art

UOC6 HPW3

This course is designed to enable students with a particular interest in working in the natural environment to devote an extended and concentrated time in the field to research a chosen location. By direct experience and observations, students will deal with the natural world as a source of ideas and inspiration particularly relevant to the focus of their major studies in sculpture. Students will be encouraged to seek out, identify and document new material that they can gather in the field that they feel will be most relevant to their developing work in the studio.

SART2828

Artists' Books

School of Art

UOC6 HPW3

This course will enable students to acquire skills in the production of artists' books, folios and other limited edition publications. Examples of the different kinds of artists' publications will be examined. A variety of materials, skills and techniques, both traditional and contemporary, which are involved in book and folio production will be demonstrated. Students will have the opportunity to produce an artists' book.

SART2829

Anatomy for Artists

School of Art

UOC6 HPW3

This course will provide an introduction to human anatomy through the studies of comparative anatomy, skeletal structure, musculature and a perspective on the history and philosophy of anatomical images. A practical examination of the structure, form and function of the body will develop an understanding of the human figure. The course will also include the study of canons of proportion and cultural perceptions of the body.

Emphasis will be placed on direct observations of the nude. Students will draw from the skeleton, casts and prepared anatomical specimens. A range of approaches will be covered that will encourage students to understand basic anatomical constructs. This course is designed to be relevant to a broad range of student interests from diverse disciplines.

SART2831

Spatial Constructions in Drawing

School of Art

UOC6 HPW3

This course is designed to consolidate and extend previous drawing experience. Students will be engaged in the practical representation of form/space relationships within interior and exterior spatial contexts. Specific studies may be made from architecture, furniture, the street, land and natural forms. Particular reference will be made to human scale and location in each spatial context.

SART2832

Life Drawing

School of Art

UOC6 HPW3

This course will provide the opportunity for students at all levels of drawing experience to explore the drawing of the human figure. Students will develop an understanding of the structure and form of the human body. A range of approaches will be covered that will encourage students to understand relationships of contour, form, mass, volume, line, movement, rhythm and gesture. This course will provide an introduction to anatomy. Emphasis will be placed on direct observations and their interpretation in graphic media.

SART2833

Figurative Composition in Painting

School of Art

UOC6 HPW3

This course is designed to enable students to explore a range of visual images and ideas related to the human figure. The course will deal with practical and theoretical issues of figurative painting. Through interpretation and translation of two and three dimensions the student will examine space, form and composition. Students will also be encouraged to investigate the historical and contemporary contexts of the various genre associated with figurative representation.

SART2834

Experimentation in Mixed Media

School of Art

UOC6 HPW3

This course will facilitate experimentation across disciplines. Students will be encouraged to investigate the physical and aesthetic possibilities and limitations of a range of media and materials. Attention will also be given to developing such practical skills and methodologies as may be required by students' own workshop projects.

SART2835**Composition and Design**

School of Art

UOC6 HPW3

This course will introduce students to the theory and application of two dimensional composition and design. It will examine terminology, proportion and format, elements and principles of design and colour theory. It will investigate the application of theories of composition, colour interaction and visual measurement.

SART2836**Colour**

School of Art

UOC6 HPW3

This course will investigate the theory and practice of colour as it applies to the discipline of painting.

SART2841**Electronic Technologies**

School of Art

UOC6 HPW3

This is a workshop based course which aims to provide the student with skills in the application of low voltage electricity and electronics sculpture. Basic understanding of power source and linking will precede instruction in the use of small motors and lighting units. This will progress to practical exercises in the use of simple computer boards.

SART2842**Metal Casting**

School of Art

UOC6 HPW3

This is a practical class for those students seeking skills in metal casting and mould making. Through lectures, demonstrations and projects, students will learn how to make moulds of increasing complexity and to cast various metals, especially bronze. The theory of metal casting will be discussed as it applies to individual work required by the student.

SART2845**Drawing/Painting Field Studies**

School of Art

UOC6 HPW3

This course is designed to enable students to experience the practical applications of a concentrated time in the field drawing and painting a range of visual motifs derived from a first hand encounter with a specific landscape. By working 'en plein air' from direct observations, this course will deal with the natural world as a source of ideas and inspiration and the practical solutions to working outside the studio environment. Students will also be required to use the material gathered in the field in developing studio work.

SART2846**Figurative Sculpture**

School of Art

UOC6 HPW3

This is a workshop based course founded on observation and interpretation of the human figure. It contains information and practice concerning skills in representing the figure in various materials, with aesthetic considerations. Modelling and casting skills are followed by basic constructivist techniques.

SART2848**Advanced Drawing/Painting Field Studies**

School of Art

UOC6 HPW3

This course is designed to enable students with a particular interest in the natural world to devote an extended and concentrated time in the field to researching a remote location through drawing. By direct encounter and observations, students will deal with the natural world as a source of ideas and inspiration particularly relevant to the thrust of their major studies in drawing and painting. Students will be encouraged to seek out, identify

and document new material that they can gather in the field that they feel will be most relevant to their developing work in the studio.

SART2849**Alternative Printmaking**

School of Art

UOC6 HPW3

This subject will allow students at any level of experience to explore the use of alternative materials and procedures in printmaking. Through lectures, demonstrations and projects students will gain understanding and skills in the uses of inexpensive and low-tech materials in the production of medium to large scale printworks. Emphasis will be placed upon investigating and exploiting the manner in which these materials and techniques influence the resulting imagery with respect to contemporary practice.

SART2851**Print as Object**

School of Art

UOC6 HPW3

This course is designed to consolidate and extend previous printmaking experience. Students will be engaged in projects using both traditional and non traditional materials, which will allow them to explore the concept of a print in relation to the third dimension. Specific techniques will be demonstrated which involve the manipulation of three dimensional space. Beginning with exercises utilising comparatively low relief techniques such as embossing and paper casting, students will move towards the construction of multiples, and finally to the fabrication of printworks which are freestanding, or in the form of an installation piece.

SART2856**Digital Printmaking**

School of Art

UOC6 HPW3

This course will introduce students to digital imaging and output procedures as they apply to printmaking. Through lectures, demonstrations and projects, students will gain understanding and skills in the use of computing software and hardware as a means to extending the possibilities for the creation of unique and original works of art in a fine art context. Emphasis will be placed upon the applicability of methods and materials to artistic purpose; the pros and cons of these procedures as compared directly with traditional print practice, and the extension of traditional print media through the incorporation of these practices into existing technologies.

SART2859**Abstraction for Drawing and Painting**

School of Art

UOC6 HPW3

This course will assist students to develop and extend their awareness of concepts of abstraction. Through a series of studio based projects, students will gain knowledge of historic and contemporary models of abstraction as well as an understanding of formal developments as they apply to drawing and painting.

SART3340**Drawing/Painting 4A**

School of Art

UOC6 HPW3

Prerequisite: SART2330

In this course students will concentrate on developing their individual creative interests. In consultation with lecturers, students will undertake a body of studio work which demonstrates the relationship between their own ideas and current concepts and conventions. Students will be encouraged to evaluate the relationship between intention and outcome achieved in their studio practice.

SART3342**Printmaking 4A**

School of Art

UOC6 HPW3

Prerequisite: SART2332

In this course students will further investigate and resolve the significant concepts and conventions of the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their emergent practice. Various media, techniques and aspects of printmaking will be examined, and students will be

encouraged to consolidate concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART3343

Sculpture/Performance/Installation 4A

School of Art

UOC6 HPW3

Prerequisite: SART2333

This studio based course centres upon the students' self initiated work programs which are devised in consultation with their lecturers towards the development of their emergent practice. Tutorials, lectures, field work, the acquisition of advanced skills in studio research methodologies and the presentation of seminars by each student about the content and contexts of their practice are employed to achieve a thorough knowledge and critical awareness of contemporary sculptural practice and an ability to articulate the concerns of their art making. An experimental approach to sculptural practice is encouraged and may take the form of divergent or interdisciplinary works such as site specific, temporal, ephemeral or performative installations, or the development of particular sculptural forms related to object making or works related to the body.

SART3350

Drawing/Painting 5A

School of Art

UOC6 HPW3

Prerequisite: SART3340

In this course students will concentrate upon their major creative interests. Students will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practice. In this course students are expected to extend and develop the focus of their inquiry towards a coherent body of work which incorporates previous theories and concepts.

SART3352

Printmaking 5A

School of Art

UOC6 HPW3

Prerequisite: SART3342

This course will consolidate concepts and skills developed in previous sessions. Students will be required to execute a body of work which demonstrates the relationship between their own practice and contemporary issues. Students are expected to incorporate previous investigations into theory and concept.

SART3353

Sculpture/Performance/Installation 5A

School of Art

UOC6 HPW3

Prerequisite: SART3343

This studio based course focuses on the resolution of the students' self initiated projects which are devised in consultation with their lecturers towards the development of their emergent practice. Tutorials, lectures, field work, studio research methodologies, and the presentation of seminars by each student about the content and contexts of their practice are employed to achieve the synthesis of conceptual concerns and studio practice. The students are required to furnish support material and visual documentation of works produced during their sculpture studies, along with a body of works that represent the culmination of an intensive application of their study of sculptural practice.

SART3360

Drawing/Painting 4B

School of Art

UOC6 HPW3

In this course students will concentrate on developing their individual creative interests. In consultation with lecturers, students will undertake a body of studio work which demonstrates the relationship between their own concepts and outcomes. Students will specialise in a range of media pertinent to their individual practice with a demonstrable relationship between content and process.

SART3362

Printmaking 4B

School of Art

UOC6 HPW3

In this course students further investigate and interpret the significant conventions of the disciplines within printmaking. In consultation with lecturers, students will further consolidate a program of printmaking studies which reflects their individual interests. Various media, techniques and aspects of printmaking will be refined, and students will be encouraged to resolve the characteristics of their chosen media. Documentation and conservation of prints and printmaking will be covered.

SART3363

Sculpture/Performance/Installation 4B

School of Art

UOC6 HPW3

This is a studio based course that pursues a self initiated program of project work, formulated in consultation with the student's lecturers. Studio research training requires students to submit project proposals and to furnish support material for a series of works of a standard appropriate to this level of study. Students are required to demonstrate the intellectual and practical skills required to execute a coherent body of work. With lecturers' guidance students broaden their understanding of the relationship of their conceptual concerns to their personal working methods, their project management skills, enabled by a hypothetical public art project, strategies for research, the representation of ideas, and the presentation of their art work.

SART3370

Drawing/Painting 5B

School of Art

UOC6 HPW3

In this course students will concentrate on the resolution of their major creative interests. Students will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practice. In this course students are expected to resolve the focus of their inquiry towards a coherent body of work which incorporates previous investigations into theories and concepts. Appropriate techniques of presentation for exhibition will be addressed in this course.

SART3372

Printmaking 5B

School of Art

UOC6 HPW3

This course will consolidate concepts and skills developed in previous sessions. Students will concentrate upon their major creative interests and will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practices and concepts. Appropriate techniques of presentation for exhibition will be addressed in this course.

SART3373

Sculpture/Performance/Installation 5B

School of Art

UOC6 HPW3

This studio based course is comprised of a self initiated work program that is planned in consultation with the students' lecturers. The result of this program will be a body of work of a standard appropriate to this level of study, suitable for public exhibition. This process is supported by the continued acquisition of advanced skills, refined perceptual analysis, material manipulation, and technologies pertinent to the students' ideas. This includes the writing of project proposals, exploratory, interdisciplinary research, the planning, production and presentation of projects, and the documentation of completed works at a professional standard. This course provides a focus for the development of strategies towards the rigorous resolution of the student's artworks as an emergent, professional artist.

SART3501

Advanced Life Painting

School of Art

UOC6 HPW3

The aim of this course is to enable students to develop skills and an awareness of aesthetic values in life painting so that the student can use the discipline of painting as a means of individual artistic expression. The student will explore theoretical concepts and develop relevant skills to allow them to realise their ideas. The student will undertake projects aimed at encouraging an individual, creative and professional approach to painting.

SART3800**Professional Practice**

School of Art
UOC6 HPW3

This course intends to prepare students for professional practice as artists (or as arts-related professionals) in order to ease the transition from student to the work place.

The course provides an overview of professional practice in Australia, including such topics as: the arts infrastructure and 'industries'; arts and cultural policy and funding; legal and commercial frameworks; professional ethics; intellectual property and copyright; service organisations, unions and professional organisations.

The course also introduces students to some of the basic skills needed for establishing professional practice in such areas as: small business organisation and management; taxation, finance and accounting; planning, marketing and promotion; preparation of applications (for grants, studios, scholarships), submissions (exhibitions, projects), documentations of work, and curriculum vitae.

SART3801**Special Projects - Studio**

School of Art
UOC6 HPW3

This course is intended to facilitate the School of Art in developing its educational program for undergraduate students by incorporating such opportunities into the academic program. Specific course outlines will be distributed detailing the academic content, objectives, assessment tasks and criteria, modes of teaching and learning, expectations and requirements of student participation appropriate to the event/proposal. Please note that there may be costs involved (such as costs associated with travel, accommodation, meals and museum visits) in taking this course.

SART3860**Approaches to Digital Outputting for Artists**

School of Art
UOC6 HPW3

The objective of this course is to give a wide selection of students an understanding of the diverse range of digital output options presently available at UNSW that are of potential interest to the artist. As the aim of the course is to teach and encourage innovation with outputting devices, it is desirable that students have knowledge of the software needed to create the output. Currently this software could include Photoshop, Illustrator, and Maya. Students will not require knowledge of all programs, but choose the one that relates to their desired output. Alternatively, students may do a course of study in the software required to achieve their desired output at the same time.

SART3862**Ceramic Shell Casting**

School of Art
UOC6 HPW3

This sculpture course is an advanced studio workshop devised to extend the student's understanding, research skills and practical expertise in traditional and alternative metal casting technologies. Research and practice using a variety of casting techniques will be undertaken with a focus on ceramic shell casting. The conception and processing of the student's self initiated project work will be developed in the context of contemporary art theory and practice.

SART3863**Installation and Electronic Art**

School of Art
UOC6 HPW3

This research based elective course in studio practice engages in the investigation of the theory, aesthetics and three dimensional applications of electrical, electronic and digital components in contemporary sculpture, performance, installation and digital media. Research will be studio based and it is expected that a diversity of ideas and practices within the electronic arts will be explored. The course will build upon the students' technical knowledge of electronic and digital technologies to conceptualise, process and present completed art works. The course has a studio theory component in which all students will actively engage in the research, discussion and debate of issues related to contemporary thought in electronic arts, such as interactive sculpture, installation, IT spaces, and the interface of the visual arts with technology and science.

SART3864**Advanced Electronics**

School of Art
UOC6 HPW3

An advanced workshop devised to extend students' existing skills and understanding of artistic practice at the intersection of sculpture, installation and performance with electronic technologies and digital media. The acquisition of skills and research methods in technical areas are fuelled by the students' advanced, self initiated project work. Reportage of research is required as a skill sharing strategy. A diversity of practices will be explored, ranging from movement and light sensing to digital input and imaging, to site specificity and presentation methodologies. Students will be encouraged to liaise with both industrial and research organisations to achieve goals and meet deadlines.

SART4030**Honours Paper**

School of Art
UOC6 HPW0

A paper of approximately 5,000 words researching a selected subject, or subjects, related to the student's studio practice and interests. Subject to approval, the work undertaken will be initiated by the student.

SART4044**Honours Studio Practice**

School of Art
UOC18 HPW0

The completed studio-based research works appropriate to the field of study which will be formally exhibited, published or displayed at the end of the course.

SCIF1110**Perspectives in Medical Science 1**

Faculty of Science
UOC3 HPW2
Excluded: BSSM1110.

In this course we examine the historical background to the advent of scientific medicine in the 19th and 20th centuries, looking particularly at the intellectual climate which made such innovations possible.

This course is restricted to students enrolled in programs 3991 Bachelor of Medical Science and 3821 Science/ Medicine.

Assessment is by written work and participation, and open-book class test.

For further information about this course contact the School of History and Philosophy of Science.

SCIF2220**Perspectives in Medical Science 2**

Faculty of Science
UOC3 HPW2
Excluded: BSSM2220.

This course is based on a series of colloquia given by visiting specialists on topics of historical, philosophical and contemporary relevance in medical science. It is intended, as a sequel to SCIF1110, to broaden students' understanding of the extent to which science is important throughout society, well beyond laboratory-based conceptions of scientific activity.

The course is available only for students enrolled in program 3991 Bachelor of Medical Science and program 3821 Science/ Medicine.

For further information regarding this course, please contact the School of Medical Sciences.

SCIF3001**Exchange Program with National University of Singapore for (northern) Summer Session**

Faculty of Science
UOC6 HPW6

This course covers an exchange program that permits UNSW Advanced Science students to complete a 6-week residential program of studies and cultural experience in Singapore and on Tioman Island in Malaysia. In Singapore students undertake an intensive course of Chinese or Indonesian language as well as another course component related to Business, History, Politics and/or Cultural Developments in the Asian context. Students study biodiversity during a 1-week residence on beautiful Tioman Island.

Enrolment in this course is subject to approval by the Science Student Centre.

Note: Students will incur some personal costs.

SCIF4013

Combined Geology Physics Honours Full-time

Faculty of Science
UOC24

Combines Geology and Physics in Program 0100, made by arrangement with the Heads of the two Schools.

SCOM1011

Science, Technology and Society

Faculty of Science
UOC6 HPW3
Excluded: HPSC1400, SCTS1001, SCTS1106.

Examines the relations of science and technology with societies in the modern world. The status and authority of science. Can science tell us what we ought to do? Critiques of science. Is technology applied science? What is the relation between technology and social change? The political uses of expertise. Experts and the rest of us. Issues of participation. These topics will be explored theoretically and by reference to case studies including: modern genetics and its use in agriculture and medicine; information technology, computers and cyberspace; energy technologies, nuclear and solar; and technologies of everyday life.

SCOM1021

Introduction to Science Communication

Faculty of Science
UOC6 HPW3

This course employs activities and discussion to introduce students to methods of reporting, discussing, debating and learning in relation to concerns involving science. The course surveys employment in science communication and introduces the range of skills required of practitioners in the area. It provides practical skills in research, organising, writing and presenting scientific and quantitative information to a non-scientific audience with clarity and accuracy. Students will gain experience in talking and writing about science and help in achieving the skills required through presentation of science reports for group feedback. There will be consideration of the need to present information to non-scientific audiences and to consider the likely impact of what is communicated. Case studies and guest lectures will illustrate the differing requirements of communicating controversial and non-controversial issues.

SCOM2014

Science Communication

Faculty of Science
UOC6 HPW3
Excluded: SCOM1021

Activities and discussion are used to enhance students' abilities in reporting, discussing, debating, and stimulating learning in relation to science and related concerns.

The course surveys a broad range of employment in science communication from management to journalism and introduces a range of strategies required in each area. Practical skills in researching, organising, writing, and presenting scientific and quantitative information to non-scientific audiences are refined through frequent practice and feedback to improve accuracy and impact. Students also develop skills in facilitation and teamwork.

There is special focus on understanding different types of audiences - from children to non-scientific professionals - in terms of their knowledge, learning styles, and vested interest in the scientific issues addressed. The differing requirements for communicating controversial and non-controversial issues are illustrated through case studies, guest lectures, and excursions.

SCOM2021

Professional Science Communication

Faculty of Science
UOC6 HPW3
Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Key issues in science communication are addressed and skills in science communication are practised and developed - writing and speaking as well as multi-media.

Tensions faced by the professional science communicator that are addressed include: the need to identify and communicate the 'truth';

the need to simplify in order to be understood by the public and non-scientific professionals; the need to deal with a range of stakeholders with incommensurable viewpoints; and whether to allow the hopes and fears about the potential impact of what is communicated to influence the act of communication.

The course is taught as a seminar and workshop, combining examination of current issues with simulations for practising professional communication skills. Guest lecturers will include accomplished communicators from business, government and the media.

Note: This course is only offered in alternate years, and is offered in 2006.

SCOM2505

Science Communication Project A

Faculty of Science
UOC3 HPW2
Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Students pursue a project to learn about an area of science communication of their choice - e.g. museum work, web site development, writing for publication - plus project management, extending professional networks, and garnering feedback to improve what they produce. A 'learning contract' determines the scope of effort and the nature of the deliverable product.

Assessments include a log of reflections on communication, science, and professional relationships; a short interim report; and a final product.

Approval for enrolment depends on the project's suitability, and availability of a lecturer to supervise. SCOM2505 and SCOM3505 may be taken simultaneously.

SCOM2700

Topics in Science Communication- Language and History

Faculty of Science
UOC3 HPW2

This course on the role of language and history in science communication involves hands-on examination of topics such as the evolving jargon of science and technology, changes in the instrumentation of science, and the careers of people who have made scientific discoveries. The focus is on the day-to-day processes of arguing with colleagues or government bureaucrats, a scientist trying to be understood by his or her business partner, or how specialists in a field learn to exploit new instrumentation. This course reveals practical insights into how technical and nontechnical people interact in various scientific and institutional settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics such as the evolution of scientific instrumentation or the recording of oral histories of Australian science. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM2750

Topics in Science Communication - Social and Organisational Processes

Faculty of Science
UOC3 HPW2

Social and organisational processes often necessitate communication among various kinds of scientific or technical specialists as well as involvement of relatively non-technical people. New technology gets developed and integrated with other new or existing technologies, or court cases get heard on environmental issues with each side having its 'experts'. This course reveals practical insights into how technical and nontechnical people interact in various organisational and institutional settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics like - how designers and operators interact in the design of new technology or how one addresses ethical concerns in science communication. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM2800

Topics in Science Communication - Processes in Science Media and Education

Faculty of Science
UOC3 HPW2

Whenever scientific or technical specialists engage with lay people, interesting things can happen - such as the development of new technology, publicity for scientific discoveries, or changes in how science is taught. This course reveals practical insights into how technical and nontechnical people have - and how they can - communicate with each

other through the media and in educational settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics like - how to make a science video or how to design a museum exhibit. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM3011

Communicating Science: Theory and Practice

School of History and Philosophy of Science

UOC6 HPW3

Pre-requisites: 36UOC of credit in Science courses. Excluded: SCTS3127, HPSC2730

Communicating science is crucial in modern societies. Scientists need to communicate not only among themselves but with representatives of business, unions, government, the media, and environmental and community interest groups. This course examines how different ideas about the nature of science affect our understanding of how science is communicated. Topics include: the history of science communication; new communication technologies and science; popularisation; distortion; the communication of uncertainty and risk. The course considers the role of communicators and policy advisors and guides students toward the latest on-line tools required to access, evaluate and use current information about science, technology and their social and environmental impacts. The class will simulate issues of communication and the roles of science communicators and produce appropriate outputs, such as journalistic articles, press releases and presentations to be published through an online journal.

Note: This course is only offered in alternate years commencing 2005.

SCOM3021

Science Communication Internship

Faculty of Science

UOC6 HPW3

Prerequisite: SCOM1021 or SCOM2014 and SCOM2021

Students undertake an internship in a scientific or science communication workplace relevant to the student's career plans and science focus. The internship placement may be outside the University, or the student may pair up with a scientific researcher at UNSW. The intern will benefit from working with a mentor who permits them access to observe and discuss research in progress, policy issues under debate, or products being developed for commercialisation. The course coordinator will assist students to write and/ or produce a series of pieces that explain the character of the research, its primary aims, and its potential contribution to the development of a scientific field and the community at large. With the help of the course coordinator, the student will produce a series of reports on the scientific activities there, reports that are suitable for popular and technical audiences. Students will engage in regular meetings of their internship cohort to share insights and broaden their professional networks.

SCOM3505

Science Communication Project B

Faculty of Science

UOC3 HPW3

Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Students pursue a project to learn about an area of science communication of their choice - e.g. museum work, web site development, writing for publication - plus project management, extending professional networks, and garnering feedback to improve what they produce. A 'learning contract' determines the scope of effort and the nature of the deliverable product.

Assessments include a log of reflections on communication, science, and professional relationships; a short interim report; and a final product.

Approval for enrolment depends on the project's suitability and availability of a lecturer to supervise. SCOM2505 and SCOM3505 may be taken simultaneously.

SDES1101

Design Studio 1 - Elements and Principles of Design

School of Design Studies

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

In this course, students are introduced to the elements and principles of design. Acquisition of a design vocabulary will be encouraged through analysis of definitions of design, the designer, conceptualisation and

abstraction within a design context. The course will require students to begin developing a visual language for use in communicating their design intentions. Examples will clarify key points from a wide range of design practices and fields. Students will undertake and complete exercises and projects using two-dimensional and three-dimensional responses. The philosophy of integrated and multi-disciplinary design on which the Bachelor of Design is founded, is emphasised throughout this early stage of the program.

SDES1102

Design Studio 3 - Analysing Design Principles

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1101

This course extends the study of fundamental design principles. The relationship between two-dimensional and three-dimensional representation of form and space is examined through a series of process exercises and projects. Students are introduced to concepts of constructing and de-constructing form as well as relationships between form and function. The studies of Design Studio 1A are progressed to analyse designed objects, environments and graphics as well as the processes of designers and their practice. Students are required to respond to the projects contained within this course using both two-dimensional and three-dimensional techniques to communicate their creativity and resolutions. Further understanding of the design process is encouraged by placing emphasis on extended development of concepts as well as methods and techniques for presenting design solutions.

SDES1104

Interactive Systems

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1101

The aim of this course is to introduce and develop understandings about patterns of interaction between design processes and natural and manufactured systems. The relationship between nature, human society, ethical values and design are examined in the context of pressures on resources and the implications for the quality of life. The course will refer to ecology, ethics, value systems, social systems, political systems and legal systems so that students understand some of the dynamics of the social and environmental contexts for design as well as the foundations of responsible design practice.

SDES1106

Design and Computers 1 - Introduction to Graphics Computing

School of Design Studies

UOC6 HPW3

This course is an introductory investigation of computers and applications for graphics. It explores manipulation, image acquisition, layers, and various effects. The course investigates rapidly developing tool sets, identifies and familiarises students with basic user interface metaphors utilised by most software packages while placing into context software applications commonly seen in industry and studio work flows.

SDES1107

Design Studio 2 - Materials, Equipment and Process in the Design Studio

School of Design Studies

UOC6 HPW3

Corequisite: SDES1101.

The aim of this course is to introduce and demonstrate the multidisciplinary and integrated nature of the design process. Students will be introduced to basic materials, equipment and techniques involved in presenting and representing ideas both visually and verbally. The importance and relevance of two-dimensional and three-dimensional models/studies within the design process is emphasised by understanding their place as tools of exploration, communication, visualisation and presentation. This course will equip students with necessary knowledge and skills to apply within the design studio setting.

SDES1108

Design Studio 4 - Thinking and Theory in the Design Studio

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1101, SDES1107; Corequisite: SDES1102.

In this course, students are introduced to thinking processes whereby theoretical and philosophical understandings are applied to support the

creative process. These understandings within the design process are used to create complexity and to reinforce design outcomes. Further, students are involved in critical analysis of solutions derived in order to develop the capacity to evaluate different design approaches. Questions of intent, content and application are focused toward the development of the individual's visual language.

SDES1110

Design and Computers 2 - Introduction to CAD

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1106

This course provides an introductory investigation of computers and applications for 2D CAD. It explores rapidly developing tool sets, identifies and familiarises students with basic user interface metaphors utilised by most 2D CAD software packages, while placing into context software applications commonly seen in industry and studio work flows.

SDES1144

Textile Processes

School of Design Studies

UOC6 HPW3

This course introduces students to a range of textile techniques and processes used in contemporary textiles art, craft and design practices. The course allows students to develop a knowledge and understanding of these processes from historical and contemporary perspectives with projects addressing conceptual and material understanding of textile design. The course will cover a range of textile processes such as embroidery, printing, dyeing, basketry and weaving.

SDES1154

Introduction to the Jewellery Studio

School of Design Studies

UOC6 HPW3

This is a practical class open to those students requiring skills related to jewellery and silversmithing. Through lectures, demonstrations and projects, students will acquire skills in techniques and the handling of materials related to the practice of jewellery and small scale objects. As the student passes through the elementary stages, more self-initiated projects will occupy the attention of the student and lecturer.

SDES1155

Introduction to the Ceramics Studio

School of Design Studies

UOC6 HPW3

This course introduces basic ceramic processes and materials and provides the opportunity for students to develop some familiarity with ceramic media and studio skills. While primarily practical in nature, the course seeks to place the acquisition of skills within the broader context of ceramic art/ design/ craft history, theory and contemporary practice. Lectures, demonstrations and studio practice introduce a range of approaches which may include hand building, techniques, throwing, low impact processes, clay and glaze technology and firing. Appropriate health and safety procedures associated with the studio are demonstrated, discussed and applied in the production of students' work.

SDES1304

Introductory Studies: Ceramics, Jewellery, Textiles

School of Design Studies

UOC6 HPW3

This studio based course introduces the student to the broad experience of working with ceramics, jewellery and textiles. Emphasis is placed upon the development of a keen critical awareness by looking at the content and the context of contemporary visual arts and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language.

SDES1316

Ceramics 1A

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course introduces students to basic ceramic processes and materials through engagement with a series of projects that incorporate analysis, instruction/explanation and investigation. The creative potential of various

ceramic media and techniques are explored alongside the health and safety issues associated with the ceramic studio. The course is primarily practical in nature, but seeks to place the acquisition of skills within the broader context of art/ceramic history, theory and contemporary practice. Students are expected to display competence in basic studio processes by the end of the session.

SDES1317

Jewellery 1A

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course will extend students' understanding of the scope and possibilities of the jewellery workshop and provide an overview of traditional and contemporary perceptions of jewellery practice. Through lectures, demonstrations and projects, students will develop ways of working, acquiring skills and knowledge in techniques and with materials related to the practice of jewellery. Studio activity will examine the technology of metals and other materials applying such cold joining techniques as sawing, filing, drilling and riveting to translate ideas into wearable and non-wearable jewellery works.

SDES1318

Textiles 1A

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course introduces students to contemporary art textile practice, extending their understanding of the scope and possibilities of textiles. Contemporary, traditional, cultural and historical textiles are referenced and examined to develop knowledge and a critical awareness of textile processes and ways of integrating cloth, fabric, fibre and materials into the contemporary context. Textiles 1A provides the context to develop individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES1319

Ceramics 1B

School of Design Studies

UOC6 HPW3

This course introduces basic ceramic processes and materials and provides the opportunity for students to develop familiarity with ceramic media and studio skills. While primarily practical in nature, the course seeks to place the acquisition of skills within the broader context of ceramic art/design/craft history, theory and contemporary practice. Lectures, demonstrations and studio practice introduce a range of approaches which may include handbuilding, techniques, throwing, low impact processes, clay and glaze technology and firing. Appropriate health and safety procedures associated with the studio are demonstrated, discussed and applied in the production of students' work.

SDES1320

Jewellery 1B

School of Design Studies

UOC6 HPW3

This course extends students' understanding of the scope and possibilities of the jewellery workshop and provides an overview of traditional and contemporary perceptions of jewellery practice. Through lectures, demonstrations and projects, students acquire skills in techniques and the handling of materials related to the practice of jewellery and small-scale objects. Studio activity examines the technology of metals and other materials applying such techniques as sawing, filing, drilling, riveting and soldering to translate ideas into wearable and non-wearable jewellery works. This is a practical class in skills related to jewellery and metal-working.

SDES1321

Textiles 1B

School of Design Studies

UOC6 HPW3

This course introduces students to contemporary art textile practice, extending their understanding of the scope and possibilities of textiles. Contemporary, traditional, cultural and historical textiles are referenced and examined to develop knowledge and a critical awareness of textile processes and ways of integrating cloth, fabric, fibre and materials into

contemporary practice. Textiles 1B provides the context to develop individual investigations into art textiles by introducing a range of textile processes. Students are expected to attain basic competence and incorporate these textile processes into their work.

SDES1601

Colour, Composition and Typography

School of Design Studies

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces students to the critical and fundamental theories of colour, typography, graphics and composition. Understanding the relationship of colour, text, graphics and composition is seen as essential to all BDM students and their future success in the Degree. The majority of this course is conducted using analogue technology.

SDES2101

Applied/Object Studio 1 - Materials and Connections

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

This course aims to develop a design practice which requires students to integrate technical knowledge and skills with material, form and contextual issues in applied/object design. Research into a range of materials will be undertaken including material properties, structural qualities, construction methods, finishes, fittings and connections. Projects will address the conceptual, material and sculptural understandings of 3D object design. The foundation of a design process will be undertaken including: critical analysis, research, problem-solving and design development to facilitate the resolution of form and fabrication of 3D design outcomes.

SDES2102

Environment Studio 1 - Concepts and Process

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

In this course, design practice is undertaken which requires students to integrate technical knowledge and artisan skills with space, form and contextual issues in the human environment design discipline. Projects will address the conceptual, material and spatial understandings of both exterior and interior environments. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of space and form in fabricated and structured human environments.

SDES2103

Graphics Media Studio 1 - Community and Communication

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

This course explores relationships in graphic design between visual communication and audiences. The course introduces and reviews contemporary and historical graphics media practices in Australian and international contexts. Print and screen graphic outcomes and processes are examined through a series of design tasks to integrate visual research with typographic, image and layout experimentation. Students develop an introductory understanding of both conceptual and technical skills in graphics media studio practice in a series of lectures, readings and studio workshops and tutorials.

SDES2104

Ceramics Studio 1 - Material and Technologies

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

This course introduces students to the basic skills and technologies associated with the ceramic studio; and ideas, language and contexts pertinent to contemporary ceramic design practice. It provides a setting in which students integrate theoretical knowledge, technical knowledge and skills with material, formal and contextual issues in ceramic design. Theoretical and practical enquiry highlights the conceptual, material and sculptural understandings of three dimensional object design in clay and associated materials. In particular, the course provides an introduction to the ceramic studio and addresses issues of identity, seriality, certainty, familiarity and the mundane, interrogating the meaning of the repeated object. In practical terms, it provides the opportunity to investigate

techniques of replication, including the principles and applications of model and mouldmaking. Students are encouraged to develop and explore ideas in relation to the articulation, transformation and reproduction of objects using a range of ceramic materials. Elements of the design process - critical analysis, research, problem solving and design development - are undertaken to facilitate the resolution of formal, material, fabrication and design issues in ceramic practice.

SDES2105

Jewellery Studio 1

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

In this course design practice integrates conceptual exploration with technical knowledge and material investigations applied to jewellery and object design. Projects address stages of the design process, critical analysis, research, problem solving and design development and culminate in the fabrication of design solutions for wearable or body related objects. This course develops students' understanding of jewellery practice through investigations of materials and jewellery processes. In practical terms, students will examine the technology of metal and its translation through heat into three-dimensional forms. The techniques of soldering, casting, hydraulic forming and fabrication will be explored using both ferrous and non-ferrous materials, to translate design drawings and models into three-dimensional jewellery objects, both wearable and non-wearable.

SDES2106

Textiles Studio 1: Material Processes

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1102

This course introduces the language, traditions, materials, processes and practices that constitute textile design. Design projects are undertaken which require students to integrate knowledge, conceptual ideas, references and technical skills with materials, surface, form and contextual issues. Aspects of the design process, research, critical analysis, problem solving and design development are undertaken to facilitate the resolution and fabrication of textile designs. Through projects, the course develops an understanding of a variety of surface design processes and textile construction techniques to translate design concepts, drawings and models into textiles for the body and interior contexts.

SDES2107

Design and Computers 3 - CAD & Graphics Computing

School of Design Studies

UOC6 HPW3

Prerequisite: SDES1110 or SDES1106

This course is an investigation of graphics and CAD software used in the design of graphics/media and 3D models. The skill sets covered include photographic enhancement, image manipulation, typography and multi page documents, including style sheets and vector illustrations. This course also covers procedural techniques for conceptualisation in 2D and 3D as well as the processes and techniques used in computer-generated design within the graphics & print arena, objects and environments.

SDES2108

Applied/Object Studio 2 - Form Function and Fabrication

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2101

This course aims to extend knowledge of materials and processes and their relationship to three dimensional object design. Projects address the cultural positioning that objects have in the world around us. A series of case studies exemplifying design research, production/technology methodologies including moulding/casting, laser cutting and sheet forming and fabrication is undertaken. Students further develop skills in problem solving and creatively explore the relationship between the human interface and object design. Communication techniques in both 2D and 3D format are developed, including basic computer skills.

SDES2109

Environments Studio 2 - Space and Context

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2102

In this course design practice is investigated which requires students to extend their capacity to integrate technical knowledge and artisan skills with space, form and contextual issues in the human environment design discipline. Projects will address the conceptual, material and spatial understandings of both exterior and interior environments. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of complex spatial relationships and forms in articulated and structured human environments.

SDES2110

Graphics Media Studio 2 - Media and Experience

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2103

This course examines a range of media forms with a critical practitioner perspective of how experiences in media shape discussion, exchange and international understanding. Students explore media production and consumption to develop skills in media generation and visual interpretation. The aim of the course is to develop skills in discerning between information and misinformation in a range of contexts. The graphic languages of television, the internet, news print and SMS inform studio projects that develop strategies for typographic design in a range of media for information retrieval in work, leisure and entertainment contexts.

SDES2111

Ceramics Studio 2 - Concepts and Contexts

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2104

The course extends students' awareness of relevant theoretical, critical and contemporary contexts; and deepens understanding of an engagement with materials, processes and technologies relevant to ceramic design and studio production. In particular, the course highlights relationships between form and surface. It introduces and critiques processes that are involved in the development of painted, printed and digitally generated surfaces on ceramic media: students engage with issues, materials and techniques relevant in their development. Elements of the design process - critical analysis, research, problem solving and design development - are undertaken to facilitate a more complex resolution of formal, material, fabrication and design issues in ceramic design practice.

SDES2112

Jewellery Studio 2

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2105

In this course, students investigate existing design practice extending their capacity to integrate technical knowledge and skills with material and conceptual issues in the jewellery design domain. Projects address the conceptual, material and technical understandings of jewellery and object design, applying a design process that involves critical analysis, research, problem solving and design development to more complex formal and fabrication issues. This course focuses students on a thorough examination of the body as the format or site for design solutions, allowing for experimentation and the development of an understanding of techniques such as advanced fabrication, repousse, anodising, use of the lathe, and research and experimentation with a variety of non-metal materials and processes. Studio activity combines the development of one-off designs and multiple production of jewellery objects.

SDES2113

Textiles Studio 2 - Surface and Structure

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2106

In this course textile design practices are investigated, requiring students to extend their understanding of the language of textiles and their capacity to integrate knowledge, conceptual understanding and technical skills with materials, surface, form, structure and contextual issues in textile design. The design processes of research, critical analysis, problem solving and design development are undertaken to facilitate the resolution and fabrication of 2D and 3D textile designs. All projects involve conceptual development, historical and contemporary references and consideration for the application of the textile. Projects require students to consider the development of their individual design aesthetic. Through projects, the course develops an understanding of surface and print design techniques

and construction processes to translate design concepts, drawings and models into textiles for apparel and interiors contexts.

SDES2116

Design Practice

School of Design Studies

UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

In Design Practice, students will investigate: the moral and philosophical contexts for professional activity, professional ethics, contract law, patents, copyright and registration of designs, preparation and budgeting for a brief, production co-ordination & project management, preparation of reports and other written material, Corporate Identity, and Design Culture. Students will be introduced to the broader question of general management, design management and the importance of a design culture within an organisation, company or institution. The relationship between design management procedures and good design will be a focus.

SDES2140

Clay, Glaze, and Firing Technology

School of Design Studies

UOC6 HPW3

This course provides an introduction to the basic materials and technology associated with the development and production of creative work in clay. Practical and theoretical classes focus on approaches to firing; and the chemistry, preparation and modification of clay bodies, slips and glazes. Workshop activity highlights experimentation, testing and evaluation, and the application of knowledge to studio practice. It provides the context in which students may explore personally relevant ideas and goals through an investigation of a range of materials and approaches. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. The course includes an introduction to specialist software designed to facilitate relevant calculations, assist in the development of ceramic formulations and provide for the storage of data.

SDES2141

Moulding and Casting in Clay

School of Design Studies

UOC6 HPW3

This course introduces moulding, casting and extrusion processes as a means of developing and producing three-dimensional form in clay. It provides a working knowledge of the principles and applications of model and mouldmaking and encourages students to develop and explore ideas in relation to the articulation, replication and transformation of objects using a variety of ceramic media. The course spans a range of applications from casting/moulding associated with multiples and series (e.g. in small scale industrial and studio production) to casting for "one-off" or sculptural outcomes. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. In addition, the course examines the impact of new and emerging technologies, particularly computing technologies such as CAD, on the manner in which ceramic artists and designers understand, develop, produce and replicate objects.

SDES2142

Drawing, Photographic and Print Techniques on Clay

School of Design Studies

UOC6 HPW3

This course examines media and processes associated with the elaboration of both raw and fired clay surfaces. It provides students with the opportunity to explore, evaluate and develop a range of approaches to the production of graphic surfaces on clay. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Lectures, demonstrations and individual projects provide the focus for gaining understanding and skills in the practical application of drawn, painted, photographic, printed and digitally generated images/surfaces to clay. Studio activity is conducted within a context of enquiry in which students are challenged to interrogate the relationship between idea, material, process, outcome and meaning. It highlights experimentation, testing and evaluation, and the application of knowledge to studio practice.

SDES2143

Self-sufficient Studio Processes and Firing

School of Design Studies

UOC6 HPW3

This course provides an introduction to "alternative" materials and low impact processes relevant to the construction and firing of work in clay. Lectures, demonstrations and practical projects examine approaches that include adobe, pise, paper clay and a range of accessible, low impact firing methods. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Throughout, students work with readily available materials to produce clay media, equipment and firings that are inexpensive, energy efficient and easily replicated in the domestic studio.

SDES2147**Jewellery Materials and Technologies**

School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills related to jewellery and small scale object making. Through lectures, demonstrations and projects, students will experiment and investigate a wide range of materials both metal and non-metal and acquire skills in techniques and process applicable to them. This knowledge will be applied in the development of finished works.

SDES2149**Metal Casting for Jewellery and Small Scale Objects**

School of Design Studies
UOC6 HPW3

This is a practical studio based class open to those students requiring skills in jewellery and small-scale object making. This course will extend students familiarity with the scope of the jewellery workshop and build their skills in particular areas related to the production of three-dimensional forms. Through experimentation with the materials and with processes associated with lost wax casting and mouldmaking for multiple production, students will be asked to realise three-dimensional works metal works within the jewellery studio.

SDES2150**Jewellery Processes for Multiple Production**

School of Design Studies
UOC6 HPW3

This is a practical class open to students requiring skills centred in the jewellery studio. This course will develop students experiences with those jewellery materials, techniques and processes which are linked to the production of multiples and series for jewellery and small-scale objects and include the use of CAD to design object prototypes.

SDES2151**Surface Investigations in Jewellery Design**

School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills centred in the jewellery studio. This course will focus on a thorough examination of surface as applied to jewellery and object making allowing for experimentation in any one of a variety of specialist surface techniques for example reticulation, patination, married metal and granulation.

SDES2152**Jewellery Workshop in Colour**

School of Design Studies
UOC4 HPW3

This is a practical class open to students requiring skills centred in the jewellery studio. This course takes colour as a focus as it applies to jewellery practice. This advanced class will encourage students to integrate ideas, processes and materials from their major study area with the specific colour techniques demonstrated within the Workshop. Techniques such as enamelling, anodising and the application of a variety of applied pigments appropriate to the jewellery studio would form the basis for experimentation.

SDES2153**Jewellery Experiments with Emerging Technology**

School of Design Studies
UOC6 HPW3

Students will develop an understanding of jewellery practice and concepts producing both wearable and non-wearable objects. The course will guide students in their experimentation with a range of materials and techniques emphasising the use of emerging technology in the production of these works.

SDES2163**Contemporary Wearables**

School of Design Studies
UOC6 HPW3

This practical course encourages students to gain insight into, and understanding of jewellery practice in a contemporary context. Within a framework of contemporary jewellery perceptions, students will develop a sound understanding of jewellery skills and materials to be used when translating ideas into objects. Central to the course is the focus on the body as the format for wearable work.

SDES2164**Jewellery and Small Scale Object Design**

School of Design Studies
UOC6 HPW3

This course will develop students understanding of jewellery practice, as applied to three-dimensional form. Through experimentation with materials and jewellery processes students will be asked to realise both wearable works and works which are body related and which may be expressed as vessels or implements.

SDES2167**Textiles for Fashion**

School of Design Studies
UOC6 HPW3

The course provides an introduction to textiles, explored in the context of Fashion. The course covers the design of textiles for the fashion, apparel and accessories Industry. Particular emphasis will be placed on the textiles used, the selection of fabrics and the manipulation of the textile surface for fashion garments. It will also cover the work of selected designers, investigating how they incorporate specific textile techniques into their fashion ranges. The course will focus on design as a process, ways of interpreting trend inspirations and will culminate in a final textile surface design / print collection. Students will design their own textile collection based on research into current market and fashion trends, applying these influences to the design process.

SDES2168**Commercial Textile Design**

School of Design Studies
UOC6 HPW3

This course tracks the evolution of a textile design from sketch, design brief, concept development to sampling and final commercial production. It examines weave, stitch and print design processes at studio and industry level covering professional presentations, "colourways", client requirements, studios equipment and sources of inspiration. Industry visits will enable students to see the work of professional textile designers involved in the fashion, home wares & interior design industries, offering excellent insights into career possibilities in textile design. The course will cover the historical evolution of textile design and techniques and consider techniques currently used commercially including screen printing, roller printing, digital design development and direct digital printing onto fabric. Students will develop their own designs for printed textiles to set briefs, relating to fashion or furnishing fabrics.

SDES2170**Rendering and Illustration for Designers**

School of Design Studies
UOC6 HPW3

Pre:SART1333,SART1319,SART1606,SART2831,SART2832,
SDES1109.

Students will undertake traditional and contemporary methods of hand rendering illustration as well as concept drawing, process drawing, storyboard and highly finished realization drawings. This course will examine through practice the techniques, processes, media and ideas associated with various design domains.

SDES2171**Design Management Elective - Brand & Identity**

School of Design Studies
UOC6 HPW3

This subject will develop students' understanding of how design management assists in the development of a company's brand and identity. Through a series of case studies students will investigate: company branding and communication, leadership and management, retail branding and positioning strategies, corporate identity and design management within corporate culture. They will also be introduced to

the broader question of general management, and the importance of the development of a design culture within organisations whether Companies or Institutions.

SDES2174

Fashion and Costume Design 1

School of Design Studies
UOC6 HPW3

This course will introduce students to the contemporary and commercial applications of fashion and costume design. Students will learn pattern making, basic garment construction, fashion drawing and design, and they will study applied decoration, embroidery and the uses of fashion accessories. The history of costume and fashion will be explored through the study of museum objects and artworks, and this will be supported by contact with the contemporary fashion industry in Australia.

SDES2177

Design in Performance

School of Design Studies
UOC6 HPW3

Theatricalisation and design theming of public occasions, community ceremonies, performance events and sporting events is an established design trend. Design in staging large-scale events, including theatre performance, will be the major focus of this subject. Through a series of lectures and workshops, students will be introduced to the design processes used in a variety of performances. Through close examination of the characteristics by which such occasions are represented and communicated to audiences, students will systematically investigate the crafts and contemporary theories of staging such events. A design brief will be set for students to design, draw and construct.

SDES2178

Independent Study

School of Design Studies
UOC4 HPW3

This course is a directed study in a discipline or multidisciplinary area of interest and of relevance to the professional and vocational interests of the student. It should extend the knowledge and understanding of the subject through a systematic investigation and development of a project in association with a supervisor. Permission of the Head of School may be sought to determine the suitability of undertaking an independent study.

SDES2179

Design in the Theatre

School of Design Studies
UOC6 HPW3

Students will be introduced to the fundamentals of stage design for the theatre. This will include scenic design, painting, perspective, lighting, special effects and costume design. Through a series of lectures, workshops and design projects, students will explore basic design skills such as: technical drawing, rendering and model construction. Costume will cover character analysis, design, rendering, and pattern making. Historical and social research in theatre design will be given as well as design briefs for students to design, draw and construct.

SDES2184

Textiles: Woven Forms

School of Design Studies
UOC6 HPW3

This course covers the textile processes and techniques of woven, interlaced and constructed textiles with practical projects in tapestry, basketry, 3d interlacing and loom weaving. Weaving produces structures that can be used to make the finest of silk fabrics, define a shape or image in tapestry, create a texture or interlace any flexible material, metal or plastic to express a concept. Practical work in basketry, tapestry and loom weaving are complimented by historical, theoretical and conceptual references and information, providing an understanding of contemporary textile art and design practices involving woven structures.

SDES2185

Textiles: Fabric Manipulation

School of Design Studies
UOC6 HPW3

This course provides an introduction to textile processes and techniques associated with surface design and fabric manipulation as a means of expressing ideas. Practical work is complemented by critical, historical

and theoretical information which assists the students in understanding elements of contemporary textile work. This subject covers processes involved in the surface decoration and manipulation of fabric including altered surfaces such as hand embroidery, machine embroidery, piecing, and fabric collage; mixed media techniques incorporating materials other than fibre; and drawing, design and concept development.

SDES2187

The Contemporary Vessel, I

School of Design Studies
UOC6 HPW3

This course provides an introduction to basic processes and technology associated with the construction and firing of studio based work in clay. Students develop familiarity with key skills and materials used in translating ideas to objects, establishing a sound foundation from which to continue study in the ceramic discipline. Practical work is contextualised within the historical, theoretical and critical considerations/debates that frame contemporary ceramic practice. In particular, projects give prominence to disparate contemporary interpretations of the vessel and associated notions of containment.

SDES2188

Wheel Throwing in Contemporary Ceramic Practice

School of Design Studies
UOC6 HPW3

This course highlights a range of fundamental approaches and skills that underpin the multiple strands of contemporary ceramic practice. Practical work is contextualised within the historical and theoretical considerations/debates that frame contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with the development of ceramic multiples and work in series, using the wheel as the principal tool.

SDES2198

Advanced Typography and Publication Design

School of Design Studies
UOC6 HPW3

Complexity of information and data density have increased with the integration of information in a greater range of private and public contexts. This course involves cultural, historical and practical exploration of typographic and publication genres from a design perspective. The relationship between typography as an expressive medium and its technological development is explored through a series of studio workshops. Publications such as books and magazines in print and screen media are developed to gain an advanced understanding of dynamic typography, page and screen architecture and information layout for publication.

SDES2199

Propaganda and Advertising

School of Design Studies
UOC6 HPW3

Design and visual communication are often discussed in terms of transparency and clarity. This course proposes that design artefacts have rarely been politically neutral and that insights into the role of design in society can be drawn from conceptualising and developing design to express specific points of view. Students explore the relationships between graphic design and political persuasion in the 20th and 21st centuries both locally and internationally and use typography, layout and a range of media to develop both theoretical and practical understandings of "promotion" for a range of contexts. Studies of visual rhetoric, subjectivity and representation and alternative processes for the research and development of designed communication are explored individually and as a group.

SDES2200

Maps, Art and Design

School of Design Studies
UOC6 HPW3

We have evolved from thinking that the world is flat, to hand held Global Positioning Systems. What do you think of when you think of a map? How have you used maps, in your personal and professional life? The elective course 'Maps, Art and Design' explores these questions in the context of how maps and developments in measurement have impacted on the work of selected artists and designers. It also examines the influence of artists and designers on the early development of mapmaking. Grids, models, diagrams and maps, their structures, symbols, and orientation of space,

provide creative opportunities which students will explore in practical, sequenced projects. From small to large scale, students in this course will create individual portfolios of practical examples of different types of maps and two dimensional models. From personal mind mapping, to archaeology, to global mapping systems, this course will take you on a journey of creative discovery.

SDES2213

Digital Textiles

School of Design Studies
UOC6 HPW3

Digital design for textiles is covered in this course, introducing the specific requirements for digital textile design and production. Digital technologies have radically changed the way textiles are designed, printed, stitched, tufted and woven. This course will give students an understanding of these digital processes, designing in Photoshop for specific textile design projects. Studio design projects will cover all aspects of digital textile design from repeats, "colour ways", directional effects, production, finishing and end use applications.

SDES2214

Art and Fashion

School of Design Studies
UOC6 HPW3

This studio-based course explores the relationship between art and fashion, looking specifically at how artists have used clothing and the creation of garments as a medium for their creative expression. "Art and Fashion" presents the work of artists and practitioners from the Futurists to today who clearly demonstrate the significance of fashion and clothing as an expression of the aesthetics and the philosophical issues of their times. Artists and practitioners such as Sonia Delaunay, Roy Lichtenstein, Robert Rauschenberg, Andy Warhol, Beverly Semmes, Issey Miyake, Akira Isogawa, Wendy Parmour and Caroline Broadhead have all created individual one off garments for exhibition, production and the cat walk. Many have influenced fashion trends and museum collections. Studio projects will cover the design and construction of textiles and garments inspired by these artists and their practice.

SDES2325

Ceramics 2A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES1316 or SART1402

This course highlights both mechanical and non-mechanical approaches to the construction of three-dimensional objects in clay and associated considerations of form, purpose, permanence, scale and site. Studio projects require that students gain competency in the use and manipulation of ceramic materials, while encouraging an innovative, experimental approach in their deployment and an imaginative interpretation of the significant ideas, conventions and precedents of the discipline.

SDES2326

Jewellery 2A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES1317 or SART1402

This course will develop students understanding of jewellery practice, as applied to three-dimensional form. Through experimentation with materials and jewellery processes students will be asked to realise works which are body related three-dimensional jewellery objects. Studio activity will examine the technology of metal and its translation through heat into three-dimensional forms. The techniques of soldering, casting and advanced fabrication will be explored using both ferrous and non-ferrous materials to translate two-dimensional designs into three-dimensional jewellery objects.

SDES2327

Textiles 2A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES1318 or SART1402

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 2A provides an environment and context to develop

individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES2328

Ceramics 2B

School of Design Studies
UOC6 HPW3

This course highlights a range of fundamental approaches and skills that underpin the multiple strands of contemporary ceramic practice. Practical work is contextualised within the historical and theoretical considerations/debates that frame contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with the development of ceramic multiples and work in series, using the wheel as the principal tool.

SDES2329

Jewellery 2B

School of Design Studies
UOC6 HPW3

This course develops students' understanding of jewellery practice as applied to three-dimensional form. Through experimentation with materials and jewellery processes, students are asked to realise works which are body related and which may be expressed as vessels or implements, expanding their understanding of this traditional component of jewellery practice. The techniques and processes introduced may include the fabrication of hollow forms, raising and die-forming. Students are required to work with a variety of materials, exploring their potential and limitations through the application of jewellery skills. Each set of exercises culminates in a body related three-dimensional object.

SDES2335

Ceramics 3A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES2325

This course provides the opportunity for students to further develop and enhance ideas via participation in the practical activities and debates of the ceramic studio. It provides the context in which students continue to explore personally relevant ideas and goals through an investigation of a range of ceramic materials, procedures and approaches. In particular, this course highlights relationships between form and surface, introducing and critiquing processes that are involved in the development of painterly, printed and digitally generated surfaces on clay. The intention and meaning of surface elaboration and image development is examined with reference to both traditional and contemporary approaches to work in clay.

SDES2336

Jewellery 3A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES2326

This course will focus on a thorough examination of qualities of surface as applied in jewellery practice allowing for experimentation and the development of techniques such as metal alloying, etching, patination, mokume gane, keum boo and granulation. Studio activity will combine the development of one-off designs and multiple production of jewellery objects both wearable and non-wearable.

SDES2337

Textiles 3A

School of Design Studies
UOC6 HPW3

Prerequisite: SDES2327

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 3A provides an environment and context to develop individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES2338

Ceramics 3B

School of Design Studies
UOC6 HPW3

This course examines media and processes associated with the elaboration of both raw and fired clay surfaces. It provides students with the opportunity to explore, evaluate and develop a range of approaches to the production of graphic surfaces on clay. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Lectures, demonstrations and individual projects provide the focus for gaining understanding and skills in the practical application of drawn, painted, photographic, printed and digitally generated images/surfaces to clay. Studio activity is conducted within a context of enquiry in which students are challenged to interrogate the relationship between idea, material, process, outcome and meaning. It highlights experimentation, testing and evaluation, and the application of knowledge to studio practice.

SDES2339

Jewellery 3B

School of Design Studies
UOC6 HPW3

This is a practical studio class for students requiring skills in jewellery and small-scale object making. This course will extend students familiarity with the scope of the jewellery workshop and build their skills in particular areas related to the production of three-dimensional forms. Students will explore the concepts of making multiples to produce wearable and non-wearable objects. Through experimentation with materials and with processes such as casting, advanced fabrication and hydraulic forming, students will be asked to realise three-dimensional works.

SDES2345

Textiles 2B

School of Design Studies
UOC6 HPW3

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 2B provides an environment and context to develop individual approaches by exploring textile processes relating to surface design, providing knowledge to realise conceptual ideas. Students are expected to have the ability to incorporate various surface design processes into their work at the completion of the course.

SDES2355

Textiles 3B

School of Design Studies
UOC6 HPW3

This course extends the practice of contemporary art textiles explored in Textiles 2A/2B by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 3B provides the context for developing individual approaches by exploring three dimensional textile structures and techniques providing the knowledge to realise conceptual ideas. Students are expected to have the ability to incorporate 3D constructed textiles into their work at the completion of the course.

SDES3101

Applied Object Studio 3 - Reuse/Recycle

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2108

In this course, design solutions are developed from briefs that address problems associated with ethical and environmental responsibility typical of applied design in professional practice. Students are encouraged to develop a philosophical approach to their design process and apply their skills to facilitate the resolution of form and fabrication of design solutions. Projects address the multidisciplinary relationships between manufacturing, design and the end user. Students develop skills in analysing and articulating primary and secondary research and communicating this information in both 2D and 3D formats. 3D computer modelling and rendering is introduced and designs are conceived as full-scale prototypes.

SDES3102

Environments Studio 3 - Commissions and Practice

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2109

In this course, design solutions are developed from briefs that are academically based or emulate problems typical of environment design in professional practice. The design proposals must address complex contextual issues and the interactions presented by the brief. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation by use of environment design conventions.

SDES3103

Graphics Media Studio 3 - Visual Representation

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2110

This course explores strategies for the design of visual information for print, interactive and signage design. A range of multi-dimensional spaces in which graphic designers provide navigation cues and complex information will be considered from the perspectives of content, context and purpose. Students design information graphics for specific users according to a brief provided by a client in a real-world setting.

SDES3104

Ceramics Studio 3 - Innovation and Interdisciplinarity

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2111

The course deepens students' awareness of the theoretical, historical, critical and interdisciplinary settings of contemporary ceramic design. Moreover, it extends students' capacity to operate independently in response to the design brief through increasing experience of the complexity and attributes of diverse ceramic materials, their application and processing. It provides the opportunity to extend skill, knowledge and familiarity with the conceptual contexts relevant to the design and production of objects in clay and associated materials. Students develop design solutions from briefs that are academically based and emulate the approaches and problems typical of ceramic design in the professional context. The design proposals address complex contextual issues and the interactions presented by the brief. Students are encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation.

SDES3105

Jewellery Studio 3 - Contextual Issues

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2112

In this course design solutions are developed from briefs that are academically based or emulate problems typical of jewellery design in professional practice. The design proposals must address complex contextual issues and the interactions presented by the brief. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation.

SDES3106

Textiles Studio 3 - Forecasting and Innovation

School of Design Studies
UOC6 HPW3
Prerequisite: SDES2113

This course provides an opportunity for students to develop and predict design solutions from briefs that emulate approaches and problems typical of the professional textile design industry. Individual design proposals will address complex contextual issues and the interactions presented by the brief, requiring design solutions ranging from one-off textiles for exhibition and production, to designs and trend predictions for commercial textile production. Briefs cover design for a range of industries and may include fashion, apparel, homewares, rugs, interior and exterior textile designs. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation, presentation and the execution of innovative textile designs.

SDES3107**Design and Computers 4 - Introduction to Multimedia**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2107

This course is an introductory investigation into computers and interactive multimedia authoring and its application in the graphics/media industry. The course includes combinations of various media such as sound, animation, digital video and dynamic interactive eventing mechanisms. This course introduces interface design processes and concepts within an industry context.

SDES3108**Applied/Object Studio 4 - Design and Production**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3101

Self-direction is encouraged so that students apply their skills within the development and articulation of a project brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques. Projects undertaken consider a range of manufacturing processes and production systems used in industry and demonstrate a professional focus on the design process. Collaboration with industry is utilised in the development of projects. Students acquire knowledge of detailing, construction techniques and costing. Designs are realised as either scaled models or full-scale prototypes.

SDES3109**Environments Studio 4 - Philosophies and Processes**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3102

The aim of the course is to build on the skills and knowledge of Environments Studio 3 and to increase the complexity of studio practice within the environments discipline. Self-direction is encouraged so that students develop and apply their skills within the development and articulation of a brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques.

SDES3110**Graphics Media Studio 4 - Design and Reflection**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3103

This course explores advanced concepts and practices in graphics media concerned with a range of approaches to visual identity and reflective practices in design. Studio discussions, lectures and readings contextualise designer, client and supplier, user and artifact interactions. Students develop a design portfolio and through reflection on designs completed in the program, explore strategies to attract client-based work and/or to attract funding for self initiated work in future practice.

SDES3111**Ceramics Studio 4 - Research, Application and Practice**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3104

The course provides for consolidation, application and elaboration of skills in the design and prototyping/production of a unique body of ceramic work. Students extend research relevant to their individual design practice and produce a body of work which evidences a critically engaged and technically accomplished/ appropriate approach. Self-direction is encouraged so that students develop and apply their skills within the framing and articulation of the brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques.

SDES3112**Jewellery Studio 4 - Design and Production**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3105

This course extends the skills and knowledge of Jewellery Studio 3 and increases the complexity of the studio practice within the jewellery domain. Self-direction is encouraged so that students develop and apply their skills within the development and articulation of a brief.

Projects address the conceptual, material and technical understandings of jewellery and object design and require, in some instances, for students to liaise with industry partners in the development of their design solutions. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication.

SDES3113**Textiles Studio 4 - Textile Applications**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3106

The aim of this course is to extend the students' design experience through complex projects in textile design, building on the skills and knowledge acquired from previous textile studios. Self direction is encouraged so that students develop and apply their skills within the development and articulation of a brief appropriate for the textile art/design industry. Briefs cover design for a range of industries and may include fashion, apparel, homewares, rugs, interior and exterior textile designs. Project documentation and presentation methods are expected to reflect a substantial individual sophistication of textile design ideas, techniques, execution and realisation for the diverse textiles industry.

SDES3162**Non-functional Ceramics**

School of Design Studies

UOC6 HPW3

This course provides an introduction to processes and technology associated with the construction and firing of studio based work in clay. It provides the opportunity for students to explore technical and creative skills in developing and executing studio based work in clay. Students develop familiarity with key skills and materials used in translating ideas to objects. The practical component of the course engages students with ceramic processes and materials while critical/theoretical elements encourage students to deepen their understanding of contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with non-functional, three dimensional ceramics.

SDES3165**The Replicated Object - Jewellery Multiples**

School of Design Studies

UOC6 HPW3

Students will develop an understanding of jewellery practice and explore the concepts of making multiples to produce wearable and non-wearable objects. Students will be encouraged through a range of material and process experiments to focus their making on the production of jewellery multiples and series in the studio.

SDES3166**Jewellery Design for Fashion**

School of Design Studies

UOC6 HPW3

Students will develop an understanding of contemporary jewellery practice and explore the concepts of jewellery as expressed in a fashion context. This practical class will involve the design of both wearable and non-wearable body related objects. Students will be encouraged through a range experimentation in materials and processes to focus their making on the production of jewellery in the studio environment.

SDES3169**Textiles: New Technology**

School of Design Studies

UOC6 HPW3

This course introduces the new technologies and processes developed by artists and industry specialists for textiles in the worlds of art, fashion, design, engineering and science. It covers recent developments in textile fabrics, materials, structures, manufacture, technologies and processes. Areas examined may include thermoplastics, smart textiles, micro electronics, molecular nanotechnology sustainability and green textiles transfer print processes, direct digital printing, new developments in man made and natural textiles properties and architectural, medical, engineering, manufacturing and sporting applications for new textiles.

SDES3170**Textiles: Nylon to Now**

School of Design Studies

UOC6 HPW3

This course tracks the development of man-made 'techno' textiles for fashion, design, interior and environmental applications. Exploring fibres and fabrics from nylon in the 1950s to the present with Issey Miyake's recent APOC range, it looks specifically at the processes and techniques associated with synthetics for colouring, printing, resisting, blistering, bonding, shaping and adding textures. Recent developments to man-made fabrics and fibres have changed their character to replicate natural materials in relation to physical characteristics, drape, handle and feel. Nylon, polyester, polyamide, non wovens, microfibres, synthetic polymers, PVC and polypropylene have application for 3D forms, interior, exterior, art, design and sporting environments. Studio projects will cover various processes and techniques and may include sublimatic printing, transfer dye printing, heat transfer printing, thermoplastic shaping, latex printing, flocking and bonding.

SDES3171

Introduction to Motion Graphics Design

School of Design Studies
UOC6 HPW3

It assumes knowledge of software applications such as Photoshop and Illustrator. This course introduces and develops student knowledge of digital video and compositing applications within a work-flow of digital image design, motion graphics and information design processes. Students will also develop skills in pre-production media processes as well as the administrative mechanisms required for video, compositing, processing, and production. Students will experience hands on tuition in computer software for graphics media design as it relates to video imaging. Students will also learn to interpret, design and produce digital video using compositing applications from briefs and concepts developed in class.

SDES3172

Digital Design - Interactive Design

School of Design Studies
UOC6 HPW3

The course is an advanced investigation into interactive computing in design graphics and its application in the graphics/media industry. This course assumes an introductory level of Photoshop, Illustrator, Director or Flash knowledge. The course also considers the areas of Graphic User Interface design, Information Technology, Information Design and the design processes involved in the creation of interactive media. The course expands the students' use of CAD modelling, image manipulation, typography, digital audio, digital video and within an interactive authoring environment.

SDES3173

Advanced Computer Graphics

School of Design Studies
UOC6 HPW3

This course focuses on an advanced investigation of various 2D software tools, while developing the knowledge, skills and attitudes required to produce artwork and output specifications to industry standard across a range of media, methods and applications. Course content includes techniques of digital bitmap compositing, vector type and shape manipulation. In addition, students will investigate a range of options for digital output, which include colour correction and use of various materials. The course assumes prior intermediate skills in Photoshop and Illustrator.

SDES3174

Digital Design - Web Design and Screen Interface

School of Design Studies
UOC6 HPW3

This course focuses on processes involved in the design of distributed content for the web in relation to, and satisfying the parameters set by, a specified brief and target audience. Course content includes critical analysis of selected web design, interface strategies, applications and usability. Students will investigate and research content, create and utilise navigational strategies, and apply hypertext mark-up language. Prior introductory level knowledge of Photoshop and Illustrator is assumed.

SDES3175

Fashion and Costume Design 2

School of Design Studies
UOC6 HPW3

This course will explore the scope of costume design in a theatrical context, building on the skills gained by students in Fashion and Costume Design I. Students will study historical and contemporary costume in

theatre, film and television. Cutting, decoration and the construction of theatrical costumes will be explored in order to allow students to develop individual skills and designs from set briefs. Theatrical venues and museum collections will be investigated in order to support the practical component of the subject.

SDES3176

Digital and Pre-press Design

School of Design Studies
UOC6 HPW3

The content of this course focuses on familiarising students with the industry terminology principles and processes involved in digital pre-press, direct to press and print production, while developing the knowledge, skills and attitudes required to produce artwork and print specifications to a specified industry standard across a range of media, methods and applications.

The content includes digital pre-press techniques, direct to press techniques, paper technology and other print substrates; ink technology, printing technology; printing problems and troubleshooting; print grids, formatting and imposition; process colours and pantone colours, print resolution and dot gain; principles of planning, preparation and execution of finished artwork for print; special printing effects, writing print specifications liaison with pre-press bureaux and printers, and industry expectations and standards for quality assurance and OH&S.

SDES3177

3D CAD Object and Space

School of Design Studies
UOC6 HPW3

This course focuses on advanced investigation of various 3D software tools. It develops the knowledge, skills and attitudes required to produce models and measured drafting specifications to particular industry standards across a range of media types. Course content includes critical analysis of various Computer Aided Drawing strategies for rapid prototyping and visualisation. Students will investigate and research content and create outcomes in a number of areas, including modelling strategies, basic kinematics and various rendering techniques. The course assumes introductory level knowledge of Vectorworks, Photoshop, Illustrator and InDesign.

SDES3179

Digital Design - Introduction to Flash Design

School of Design Studies
UOC6 HPW3

This course introduces vector based interface design in the context of satisfying the parameters set by a specified brief and target audience. Students will explore and apply vector based interactive applications, research content, create and apply navigational strategies and structures, generate and produce fully functioning vector content to a introductory level of design. The content includes: critical analysis of selected Flash implementations and sites; criteria governing Flash design; critical analysis of target audience for a specified brief; research and structuring of Flash design; and research and analysis of navigational strategies. Students will be expected to have experience with Adobe Photoshop and Illustrator.

SDES3181

Designing Computer Mediated Responsive Environments

School of Design Studies
UOC6 HPW3

This course focuses on computer mediated responsive environment design in relation to, and satisfying the parameters set by, a specified brief and target audience. Course content includes critical analysis of selected interactive authoring applications and industry uses. Students will explore, create, manipulate and use various sensors and software applications to mediate a range of responses within an electronic context. In addition, they will research content, and create and produce physical computing outcomes to a specified industry standard across a range of media types. The course assumes knowledge of various software packages including Illustrator, Photoshop and Director (including Lingo).

SDES3186

Textiles: Surface Design

School of Design Studies
UOC6 HPW3

This course provides an introduction to the textile processes and techniques associated with dyed and printed textiles and explores these as a means of expressing ideas. Surface design incorporates various

techniques including dyeing, block-printing, screen printing, devori, discharge, Shibori and wax-resist, which are used in contemporary art and design practice and introduced in this course. Students will develop their own textile pieces using a combination of these techniques. Practical work is complimented by historical information, cultural references and contemporary textile art, craft and design practice.

SDES3345**Ceramics 4A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2335

This course provides the opportunity for students to pursue a self-initiated approach to art practice within a creative methodology that is exploratory, speculative and personal. At the same time, students deepen their awareness of the theoretical, historical and interdisciplinary settings of contemporary ceramic practice. Students are expected to engage with an area of research appropriate to their emerging practice and produce a body of work which evidences a development of relevant ideas and skills. Group seminars and critique develop the capacity to express the central concerns of studio work, constructive critical abilities and skill in their articulation.

SDES3346**Jewellery 4A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2336

This is a course of advanced studio practice that requires the student to initiate a jewellery design proposal; research and investigate appropriate technology, materials and audience; place the design within a conceptual framework and; construct a body of work that relates to the jewellery process.

SDES3347**Textiles 4A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES2337

This studio based course provides the opportunity for students to pursue a self initiated work program devised in consultation with lecturers. Students are expected to develop an area of research appropriate to their emerging practice and produce a body of work that demonstrates an understanding and refinement of relevant concepts with technical ability. Students extend their understanding of the theoretical, historical and interdisciplinary nature of contemporary textiles practice. Textiles 4A integrates lectures, individual and group tutorials, studio research methodologies and the presentation of seminars by each student covering the content and context of their practice, to achieve a thorough knowledge and critical awareness of contemporary textile practice and an ability to articulate the concerns of visual art textiles.

SDES3348**Ceramics 4B**

School of Design Studies

UOC6 HPW3

This course provides an introduction to the basic materials and technology associated with the development and production of creative work in clay. Practical and theoretical classes focus on approaches to firing; and the chemistry, preparation and modification of clay bodies, slips and glazes. Workshop activity highlights experimentation, testing and evaluation, and the application of knowledge to studio practice. It provides the context in which students may explore personally relevant ideas and goals through an investigation of a range of materials and approaches. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. The course includes an introduction to specialist software designed to facilitate relevant calculations, assist in the development of ceramic formulations and provide for the storage of data.

SDES3349**Jewellery 4B**

School of Design Studies

UOC6 HPW3

This is a practical class open to those students requiring skills centred in the jewellery studio. This course will focus on a thorough examination of surface as applied to jewellery and object making allowing for experimentation in a variety of specialist surface techniques, colours and coatings.

SDES3355**Ceramics 5A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3345

Students further develop a self initiated approach to art practice within a creative methodology that is exploratory, speculative and personal. It provides for the resolution of work devised in consultation with studio staff. Students extend research relevant to their individual art practice and produce a body of work which evidences a technically accomplished/appropriate, critically engaged approach to making.

SDES3356**Jewellery 5A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3346

Students are required to produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed areas of research relevant to their jewellery practice. The presented body of work will evidence the refinement of students' conceptual and technical capabilities.

SDES3357**Textiles 5A**

School of Design Studies

UOC6 HPW3

Prerequisite: SDES3347

This studio based course requires that students produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed area of research relevant to their textiles practice. The presented body of work will evidence the refinement of the student's conceptual and technical capabilities. An experimental approach to textiles practice is encouraged and may take the form of divergent or interdisciplinary works such as site specific work, 3D forms, object making, works relating to the body or design for exhibition and studio production.

Textiles 5A covers an integrated approach to studio practice through lectures, tutorials, studio research methodologies and the presentation of seminars by each student about the content and context of their practice. These are employed to achieve the synthesis of conceptual concerns and studio practice.

SDES3358**Ceramics 5B**

School of Design Studies

UOC6 HPW3

This course provides the opportunity to pursue a coherent project that supports the student's emerging ceramic practice. Students are expected to engage with an area of research appropriate to their practice and develop a body of work that evidences maturation and the sophistication of relevant ideas and skills. Students may work across the range of approaches that constitute contemporary fine art contexts. Experimentation, interdisciplinary and hybrid means are supported and encouraged. Group seminars and critique develop the capacity to express the central concerns of studio work, constructive critical abilities and skill in their articulation.

SDES3359**Jewellery 5B**

School of Design Studies

UOC6 HPW3

This course extends the skills and knowledge developed in the jewellery studio and increases the complexity of the studio practice within the jewellery discipline. Self-direction will be encouraged so that students develop and apply their skills within the articulation of a brief. Projects will address conceptual, material and technical understandings of jewellery and object design and require, in some instances, for students to liaise with industry partners in the development of their jewellery solutions. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication.

SDES3365**Textiles 4B**

School of Design Studies

UOC6 HPW3

This studio based course provides the opportunity for students to pursue a self initiated work program devised in consultation with lecturers. Students are expected to develop an area of research appropriate to their emerging practice and produce a body of work that demonstrates an understanding and refinement of relevant concepts with technical ability. Students extend their understanding of the theoretical, historical and interdisciplinary nature of contemporary textiles practice. Textiles 4B integrates lectures, individual and group tutorials, studio research methodologies and the presentation of seminars by each student covering the content and context of their practice, to achieve a thorough knowledge and critical awareness of contemporary textile practice and an ability to articulate the concerns of visual art textiles. Textiles 4B covers demonstrations of advanced textile processes.

SDES3375

Textiles 5B

School of Design Studies
UOC6 HPW3

This studio based course requires that students produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed area of research relevant to their textiles practice. The presented body of work will evidence the refinement of the student's conceptual and technical capabilities. An experimental approach to textiles practice is encouraged and may take the form of interdisciplinary works such as site specific work, 3D forms, object making, works relating to the body or design for exhibition and studio production. Textiles 5B covers an integrated approach to studio practice through lectures, tutorials, studio research methodologies and the presentation of seminars by each student about the content and context of their practice. These are employed to achieve the synthesis of conceptual concerns and studio practice.

SDES4101

Design Studio Project

School of Design Studies
UOC12 HPW6

This student-initiated project will be positioned in a real context and provide students with an experience of the multi-disciplinary nature of design. The project will extend from research and development through to the translation of students findings into realised design solutions. The project will be developed in conjunction with selected professionals and/or with a client who presents an actual design problem. The guiding philosophy of the Bachelor of Design Studies, that of an integrated approach to design must be demonstrated throughout the course with reference to more than one studio area in the finished project. The design proposals must address complex contextual issues and fully address the constraints of the brief. Students will be required to develop a recognisable design process, to incorporate costing of the final scheme, to demonstrate design management of the project and apply their skills to clear documentation and presentation of an integrated design outcome.

SDES4102

Professional Experience Program

School of Design Studies
UOC12 HPW0

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The aim of this course is to provide students with the opportunity to experience real-life professional design situations, over an extended period. During this course, students will establish a working relationship with the profession and potential employers as well as a working knowledge of the practice of design and production.

SDES4104

Honours Project

School of Design Studies
UOC6 HPW2

Prerequisite: SAED4051.

The aim of this project is to provide the Honours candidate with the opportunity to research and document an approved design related topic. Topics that explore design's relationship to: history/theory, processes and techniques, objects and prototypes, interactivity, ethics, materials and potential use, studio management, studio practice strategies, and education are examples of appropriate research areas. The Honours program in the Bachelor of Design provides a series of seminar presentations by research experts and Honours candidates to support the development of a research project comprising a research document and, where appropriate, studio outcomes. Candidates are asked to frame a research question or

hypothesis in relation to an existing body of knowledge. The research process will include the application of a nominated research practice or methodology suited to the question. Analysis of the research findings based on documented evidence forms the basis for conclusions and suggestions for further research. Successful completion of the subject with a Grade of Credit (65%) and above will lead to the Award of the Bachelor of Design with Honours.

SDES5491

Professional Experience Program

School of Design Studies
UOC6 HPW0

The aim of this course is to provide students with the opportunity to experience real-life professional design situation, over an extended period. During this program of 25 working days, students will establish a working relationship with the profession and potential employers as well as working knowledge of the practice of design and production.

SENG1031

Software Engineering Workshop 1

School of Computer Science and Engineering
UOC6 HPW5

Corequisite: INFS1611; Excluded: SENG1020

The Software Engineering Workshop is a series of courses that span the first three years of the Software Engineering program. The course series will provide an opportunity to work in small teams on substantial, realistic projects, covering most phases of the software production life cycle. The SE Workshop stream also provides an opportunity to apply the techniques and methods covered in other courses of the course. Under guidance from staff, the intention of this series is to enable students to learn by reflective practice. Whatever steps are taken students should become aware of what they are doing, and reflect on the consequences. This is the essence of the Personal Software Process described in the textbook by Watts Humphrey. Each course in the series will involve group project work, presentations, report writing, and documentation. This is the first course in the series and will contain: an introduction to the software process and to a number of the software engineering practices to be adopted throughout the series; the formation of the first set of small groups; a number of exercises to develop group skills.

Each group will complete a domain analysis and a requirements analysis for a project. Each group will: examine similar systems; interview users or potential users of the system; develop a requirements document; validate the requirements by prototyping. This course will form the practical component of INFS1611.

Further Information: CSE class page www.cse.unsw.edu.au/~se1031

SENG2010

Software Engineering Workshop 2A

School of Computer Science and Engineering
UOC3 HPW2.5

Prerequisite: SENG1020 or SENG1031; Corequisite: INFS2603, and COMP2111.

This is the third course in the series and will cover specification. During this course the groups will take a requirements document (not necessarily the same document developed by the current teams during SENG1020) and develop a logical specification document. The specification document must be developed using the modelling techniques discussed in INFS2603 and COMP2110. As part of the specification document, the groups should identify a set of acceptance tests appropriate to the functional specification. This course forms the practical components of COMP2110.

Further Information: CSE class page www.cse.unsw.edu.au/~se2010

SENG2020

Software Engineering Workshop 2B

School of Computer Science and Engineering
UOC3 HPW2.5

Prerequisite: SENG2010

In this course, the fourth course in the series, the groups will take a specification document, such as might have been produced in SENG2010, and will produce a design document describing how the specified system will be mapped onto physical components.

Further Information: CSE class page www.cse.unsw.edu.au/~se2020

SENG3010

Software Engineering Workshop 3A

School of Computer Science and Engineering
UOC3 HPW2.5

Prerequisite: SENG2020

Each group will take a design document, such as might have been produced in SENG2020, and carry out the implementation and testing of the components of the system. As for all components of this series the implementation and testing will be documented.

Further Information: CSE class page www.cse.unsw.edu.au/~se3010

SENG3020

Software Engineering Workshop 3B

School of Computer Science and Engineering
UOC3 HPW2.5

Prerequisite: SENG3010

In the sixth and final course in the series, the groups will undertake the integration, testing, evaluation, and maintenance of a system, whose components have been produced in SENG2010.

Further Information: CSE class page www.cse.unsw.edu.au/~se3020

SENG4910

Thesis Part A (Software Engineering)

School of Computer Science and Engineering
UOC6 HPW7

Prerequisite: Enrolment in Software Engineering program 3648 or 3651 or 3652 or 3653.

This course represents the thesis proposal component. The proposal is assessed by a seminar given at the end of semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

SENG4911

Thesis Part B (Software Engineering)

School of Computer Science and Engineering
UOC12 HPW14

Prerequisite: SENG4910.

The thesis is done in the last two semesters of the BE degree program. For full-time students, seven hours per week in the first semester and fourteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the lecturing Staff of the Schools of Computer Science and Information Systems. Generally, the thesis involves the design, construction, and testing of a software application, but the thesis could be an exploration and evaluation of some aspects of a software development method. Each student is required to demonstrate the outcome of the thesis work, and present a written thesis at the end of the second semester.

Further Information: CSE class page www.cse.unsw.edu.au/thesis

SENG4921

Professional Issues and Ethics

School of Computer Science and Engineering
UOC6 HPW4

Prerequisite: enrolment in Software Engineering program 3648, 3651, 3652, 3653, 3749 or BSc Computer Science co-op program 3978.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The subject will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page www.cse.unsw.edu.au/~se4921

SERV1001

Fundamentals of Tourism

School of Marketing

UOC6 HPW3

Excluded: TAHM2001

An introductory course in the study of tourism. The origins and evolution of contemporary tourism will be carefully examined and students will be familiarized with the various supply and demand components of the tourism industry through the examination of competing tourism models. Topics to be covered include the historical, economic, social, cultural, psychological and marketing aspects of human travel and the tourism industry globally, with a special focus on the impacts of tourism and the nature and industrial structure of tourism in and to Australia.

SERV1100

Tourism & Hospitality Operational Studies

School of Marketing
UOC6 HPW6

Prerequisite: Enrolment in 3571 BCom (Services Marketing - Tourism & Hospitality)

Excluded: TAHM1666, TAHM1777

This course provides theoretical and practical training in food and beverage operations, hotel front office operations and interpersonal communication skills. The training takes place at an accredited hospitality and tourism training college and prepares students for the program requirement of 250 hours of industry employment.

SERV2001

Destination in Marketing

School of Marketing

UOC6 HPW3

Prerequisite: SERV1001

The success of most tourism businesses is reliant on the competitiveness of the host destination. This course examines the specialised nature of destination marketing to enhance students' understanding of the opportunities, challenges and constraints facing destination marketing organisations in an increasingly competitive tourism market place. Emphasises a strategic approach to marketing of destinations, which includes development of strategic and tactical campaigns, the management of destination demand and the development and management of destination image.

SERV2002

Services Operations Management

School of Marketing

UOC6 HPW3

Prerequisite/Corequisite: MARK2005

Excluded: TAHM3002

Successful service 'manufacture' and final delivery to customers/clients requires a series of well designed, well managed and seamless service processes, some backstage and some front stage. The intangibility of services complicates the traditional management task of planning, organizing, directing and controlling for the performance that goes into creating and delivering a service product. Building on the basic principles of operations management, the course examines the operations decisions that managers may face in managing their resources and delivering services to their customers to achieve service quality as well as efficiency goals. Key topics include: blueprinting the service experience, the new service development process, house of quality, setting KPIs, gap analysis, the physical environment, capacity management, waiting times and productivity measurement.

SERV2003

Service Industry Project

School of Marketing

UOC6 HPW2

Prerequisite: MARK2055

Corequisite: SERV2002

Excluded: TAHM2888, TAHM3888

A work experience project is a mandatory part of the degree program. This will be supplemented by lectures/seminars on a range of related, contemporary services marketing topics. It is envisaged the project topics might centre around blueprinting the services processes in order to solve a service operational problem; map and analyse the service quality processes (e.g. the gap model of service quality) of an organisation and prepare a set of recommendations for quality improvement; or mapping the key touchpoints and defining where value is created in an organisation's service processes; or perhaps analysing and reporting on a organisations' employment branding processes. A key learning outcome will be students ability to put various services models, frameworks and theories into practice.

SERV3001

Managing People for Service Advantage

School of Marketing

UOC6 HPW3

Prerequisite: MARK2055

Excluded: TAHM3004

In the 21st century, most service organizations in a given industry perform their core service function equally well and hence it does not become a source of competitive advantage. Competitive advantage can however be achieved by developing a service culture and a customer-centric organisation that results in delivery of excellent customer service, be it with customers of general services (e.g., telecommunications, fitness centres, hotels, tourism, restaurants, airlines, etc) or clients of a

professional service firm (e.g., accountancy, financial planning, higher education, architecture, engineering consulting). Excellent customer service does not happen by chance. It has to be designed into the firm's service delivery systems and delivered by people and technology. Employing the service-profit chain concept as a framework, this course is about designing a service delivery strategy (built around service reliability, exceeding expectations, service recovery, and fairness) then examining the role of technology and people (e.g., service vision, service leadership, 'internal' customers, service climate and teamwork).

SERV4001

Strategic Management in Tourism & Hospitality

School of Marketing

UOC6 HPW3

Prerequisite: SERV2001

Excluded: TAHM4003

This course examines the practical application of tourism and hospitality policy and planning to the operation of major tourist and hospitality segments and key organisations within those segments. The course involves experiential learning with industry executives in workshops and seminars, debating current issues.

SERV4002

Entrepreneurship in Services

School of Marketing

UOC6 HPW3

Prerequisite: MARK2055

Service industries now account for three quarters of wealth and 90% of all new employment in developed economies and approaching that in developing countries. Yet we know little about innovation in this sector. Much of today's employment is generated through SME new service ventures. This course explores entrepreneurship (and intrapreneurship) in both large and SME firm contexts, but with a focus on intangible services. The course theme is on best practice in innovation in services and identifying a range of successful organisational responses to current technological opportunities and market imperatives. Specifically the course will focus on: what opportunities and challenges do entrepreneurs face, and how might these opportunities and threats be managed? Key topics might include: a typology of service products; entrepreneurial orientation; entrepreneurs - born or made?; intrapreneurship; industry analysis; assessment of internal resources and capabilities; customer value creation; and development of a business plan.

SERV4003

Tourism Policy and Planning

School of Marketing

UOC6 HPW3

Prerequisite: SERV4001

This capstone course integrates the knowledge developed in Fundamentals of Tourism, Tourism Law/Economics of Tourism and Destination Marketing into a course that uses government policy and planning as the conceptual framework. It examines the importance of tourism policy and planning in terms of sustainable tourism development, addressing the central role of tourism public policy making. The course analyses a range of critical factors such as carrying capacity, yield management and risk management. It focuses on sustainable tourism development to explain the links between these factors and tourism policy and planning.

SESC1001

Safety, Health and Environment

School of Safety Science

UOC6 HPW4

The course introduces students to the main issues of safety, health and environmental (SHE) science. Themes and inter-relationships are explored using scenarios based in the workplace, community and environment. SHE as an integrated concept.

Notes: Only available to students who require more than 48 UOC to complete their degree requirements.

Also offered in off-campus mode in all sessions.

SESC1580

Risk Management 1

School of Safety Science

UOC3 HPW4

Exclusions: SESC6610 and students undertaking a major or minor in the BSC (3970) in Safety Science

This course provides an introduction to risk management in aviation. Risk management is first treated generally but more detailed examples focus on safety health and environmental risks. The course covers the nature of risk and the process of managing risk.

The range of risks of relevance to aviation are identified and ranked as an introduction to qualitative risk assessment. The course then covers OHS and Major Hazards legislation and general safety issues in aviation. Statistical analysis and fault and event tree analysis are used to demonstrate examples of quantitative risk assessment. Safety, Quality and Environmental management systems are discussed with reference to ISO9000, ISO14000 and AS/NZS4804.

SESC2091

Safety, Health and Environmental Hazards

School of Safety Science

UOC6 HPW4

This course introduces students to safety health and environmental hazards, including chemical hazards, atmospheric contaminants, biohazards and psychological risks. The course also introduces epidemiology as a means of studying these hazards by examining safety, health and environmental case studies.

SESC2451

Biomechanics for Sports Scientists

School of Safety Science

UOC6 HPW5

Students study the basic principles of biomechanics and apply these to the analysis of sports. Basic mechanics (statics, kinematics and dynamics) is studied in two and three dimensions. Human movement measurement methods are introduced. The mechanics of the musculoskeletal system are studied in detail in human gait - walking, running and jumping. This will integrate students' understanding of mechanics with functional anatomy through the study of normal gait dynamics, muscle function, work and power. Aerodynamics and hydrodynamics are introduced and explained through the analysis of throwing and swimming.

SESC2580

Risk Management 2

School of Safety Science

UOC3 HPW2

This course provides an introduction to the management process with a focus on operational risk issues. The process is demonstrated in case study examples involving business and safety decisions. The second half of the course identifies problems which could lead to emergency situations then considers the planning required for different types of emergency. The course covers writing emergency procedures, emergency plans, setting up an emergency control centre, running an emergency exercise and the links with the state emergency services.

While there is an emphasis on application to the aviation industry the course is of relevance to other disciplines.

SESC2800

Fundamentals of Toxicology

School of Safety Science

UOC3 HPW2

An introduction to the underlying principles of toxicology. It provides an introduction to chemical, biochemical and cellular principles. The course is aimed at students who have not previously studied chemistry or biology.

SESC3020

Occupational Health and Safety Law 1

School of Safety Science

UOC3 HPW3

This course outlines the legal regime for the regulation of occupational health and safety in Australia. It deals with occupational health and safety legislation; relevant case law; duty of care of employers, controllers of premises and suppliers and manufacturers; risk management obligations; duty of employees. The course also covers public policy issues regarding legal reforms of occupational health and safety.

Note: Also offered in off-campus mode in S2.

SESC3030

Occupational Health and Safety Law 2

School of Safety Science

UOC3 HPW3

This course extends concepts of law introduced in SESC3020, and covers other workplace legislation and procedures, such as consultation obligations, reporting obligations, incident response and investigation, and workers compensation and rehabilitation obligations.

Assumed knowledge: SESC3020

SESC3091

Safety, Health and Environmental Practice

School of Safety Science
UOC6 HPW3

A workplace assessment based course, where students are required to report on the safety, health or environmental issues of management following visits to a number of diverse industrial sites.

Assumed knowledge: SESC3101

SESC3101

Risk Assessment and Safety Engineering

School of Safety Science
UOC6 HPW4

Risk management requirements and responsibilities in safety legislation. Methodologies of risk identification and assessment. Application of principles of risk identification, assessment and control to a range of engineering safety problems including manual materials handling, mechanical plant and equipment, pressure vessels, confined spaces, fire and explosion, noise, whole body vibration, ionising and non ionising radiation, electrical safety, workplace design and ergonomics and safety in construction.

SESC3310

Social Issues in Science and Technology

School of Safety Science
UOC3 HPW2

This course is an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional engineer or scientist can play in influencing future directions.

The course is taught through a combination of group activities, case studies, projects and seminars, and covers four major topic areas: professional ethics, environment-related issues, safety and liability, and controls of future technology.

SESC3451

Human Movement Measurement Methods

School of Safety Science
UOC6 HPW6

Prerequisite: SESC2451.

Students study the theory and practice of human movement measurement.

The course is taught through lectures and laboratory sessions. Students learn 2D video measurement techniques and how to apply these to the study of human movement. Electromyography, force, temporo-spatial, balance and postural measurement and analysis methods are studied, as well as instrumentation data processing and analysis methods.

Methods for the study of human movement and skills, including gait, electromyography and sporting skills are covered in laboratory sessions.

SESC3541

Assessment of the Workplace Environment

School of Safety Science
UOC6 HPW4

This course is designed to give students an opportunity to learn and apply methods and techniques used to assess the workplace and the environment. The course is based on measurements in the working and external environment. Topics are selected from measurement and evaluation of noise, lighting, vibration, ventilation, air quality, thermal environment, radiation, chemical hazards, slip resistance etc. Assessments are carried out on sites in and around UNSW.

Assumed Knowledge: SESC3101

SESC3601

Safety, Health and Environmental Management Systems

School of Safety Science
UOC6 HPW4

Excluded: SESC6610.

Covers principles of safety, health and environment; the identification, assessment and control of organisational risks to work place and environment; the legal system, duty of care and occupational health and safety, workers compensation and environmental legislation, OHS and environmental management system standards; Integrated Management Systems, Safety, Health and environmental management standards; Integrated Management Systems, Safety, Health and environmental management systems auditing.

SESC3620

Occupational Disease and Injuries

School of Safety Science
UOC3 HPW3

This course deals with the ways in which work can affect the health of workers. Covers occupational diseases and injuries of skin, respiratory system, nervous system, reproductive system, the musculoskeletal system, kidneys and occupational cancer.

Assumed knowledge: ANAT2151

Note: Also offered in off-campus mode in Session 1

SESC4010

Project Research Methods

School of Safety Science
UOC3 HPW3

This course is the preparation for the fourth year project in safety science. It covers issues in research methodology, including literature searching, problem formulation, null and alternative hypotheses, qualitative and quantitative research designs, statistical inference and the analysis of quantitative data, and a research report. Students will be expected to be able to recognise and avoid common methodological problems in research.

SESC4211

Risk Management

School of Safety Science
UOC6 HPW3

This course gives an overview of Risk Management following the format of the Australian Standard in Risk Management (AS4360).

Tools and techniques applicable to each step of the risk management process are discussed, using examples applicable to the class. The same risk management process is applied to manage a wide range of business issues including health and safety, the environment, finance and project management. This course is therefore relevant as part of a wide variety of programs, and students from any program are accepted.

Students select examples for exercises to suit the industry and role in which they work (or intend to work). At the end of the course, students should be able to use risk management tools applicable to their specific interest and have an awareness of tools used in other industries and applications.

SESC4410

Ergonomics 2

School of Safety Science
UOC3 HPW3

Covers displays and controls, design of human-machine-environment systems, job design and work organisation, design of workplaces, the physical environment and an introduction to product design.

Assumed knowledge: SESC2091, SESC3101

SESC4820

Chemical Safety and Toxicology

School of Safety Science
UOC3

This course provides an outline of the toxicological, occupational hygiene and environmental aspects of chemical hazards and exposures. Atmospheric contaminants, metals, solvents, pesticides, carcinogens, hazardous wastes and dioxins are used as case studies.

Assumed knowledge: SESC2091

Note: Short Course mode in S1 (compulsory 2 day workshop plus assessable tasks completed subsequently). Also offered in off-campus mode in S1.

SESC4850

Management of Dangerous Materials

School of Safety Science
UOC3

Chemicals legislation, the dangerous goods system, the hazardous substances regulation and systems for management of hazardous wastes, and systems for management of chemicals in the workplace.

Note: Short course mode in Semester 2 (compulsory 2-day workshop plus assessable tasks completed subsequently). Also offered in off-campus mode in Semester 2.

SESC4924

Research Project

School of Safety Science
UOC24

Stage 4 undergraduate project comprising 24 units of credit (50% of Year 4 load, with the other 50% made up from Stage 4 courses).

This course provides an introduction to the research process. Students undertake a research project with supervision, which is written up as a research project report.

SLSP1000

Social Science and Policy

School of Social Science and Policy
UOC6 HPW3

Explores the nature of social science, the knowledge and information created by it, and how this is applied to real world policy problems. These applications are examined in the context of a range of policy areas drawn from health, education, environment and social policy. Investigates how policy is developed, changed, implemented and evaluated and the role social science plays in this process. Considers practical, political and ethical problems encountered by social scientists in applying their knowledge and skills to inform policy and the role social science plays in the management of social change.

SLSP1001

Research and Information Management

School of Social Science and Policy
UOC6 HPW4

Explores the processes involved in making sense of information used in the policy process and in generating new information through research. Introduces and examines a range of technologies to assess the use of information by policy making bodies both public and private, including the media. Provides skills in the use of such technologies and in the design, conduct and analysis of social research and considers the utilisation of such research in management and decision making.

SLSP1002

Introduction to Policy Analysis

School of Social Science and Policy
UOC6 HPW3

An introduction to the social, political and organisational context of policy making. Includes the governmental and legal framework within which public policy is made; organisations and policy; the role of interest groups and the media in influencing policy. Studies of key policy areas such as communications policy, environmental policy or health policy will be used to illustrate the concepts introduced in the course.

SLSP2000

Political Economy and the State

School of Social Science and Policy
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: PECO2000

An interdisciplinary overview of the making of economic policy and the institutional structure in which it occurs. Considers how theory informs and legitimates policy choices and how policies are dependent on historical, social and economic contexts. Major current policy case studies are used to evaluate policy implementation in Australia and internationally.

SLSP2001

Applied Social Research 1

School of Social Science and Policy
UOC6 HPW4

Prerequisite: 36 units of credit

Issues and problems in conducting social research in applied contexts. Research methods and the analysis of data: qualitative and quantitative research methods, techniques for the analysis of data including inferential statistics, the use of statistical data packages and methods of

qualitative data analysis. Reporting research findings and ethical issues in research.

SLSP2002

Policy Analysis Case Studies

School of Social Science and Policy
UOC6 HPW3

Prerequisite: SLSP2000

Examines the role of the social scientist in policy work, exploring both theoretically and practically the policy/action relationship. Case studies in policy work are introduced in workshops to develop practical skills in dealing with policy implementation issues.

SLSP2701

The Theory and Practice of Development

School of Social Science and Policy
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2000, GLST2104, INST2400, POLS2023

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant case studies of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

SLSP2820

Crime and Punishment in Historical Perspective

School of Social Science and Policy
UOC6 HPW3

Prerequisite: 36 units of credit

Examines the historical development of key institutions and practices of modern law, enforcement and punishment. Traces the evolution of crime and 'criminals', the legal code, police forces transportation versus the prison, and other components of the criminal justice system from the end of the 18th century through to the present day, and the thinking behind these developments. The lecture series provides an overview, focusing on Britain with reference to continental Europe, the United States, and Australia; tutorials explore a series of policy case studies.

SLSP3000

Social Theory and Policy Analysis

School of Social Science and Policy
UOC6 HPW3

Prerequisite: SLSP2000

Addresses the way that the application of the social sciences to policy questions involves theorising - that is, the construction and application of abstract concepts - by both observers and practitioners. The place of theory in the production of knowledge, and the way in which knowledge is reflected in the organising of social order, are subject to critical review. Tracks the development of ideas in the social sciences, including contemporary debates about modernism and post modernism, and investigates their impact on policy.

SLSP3001

Applied Social Research 2

School of Social Science and Policy
UOC6 HPW4

Prerequisite: SLSP1001, SLSP2001 or enrolment in Program 4036

Characteristics of applied social research. Planning applied research: Specifying research questions, writing research proposals. Applied research designs and their strengths and limitations: Randomised and quasi-experiments, surveys, case studies, field research & qualitative research designs. Issues in data collection: choice of method, considerations of time and cost, consultation with stakeholders, operationalisation of concepts including social measurement and scale construction. Analysis of applied research data: qualitative and quantitative techniques including qualitative data analysis, analysis of variance, correlation, multiple regression analysis, analysis of contingency tables. Use of SPSS for data analysis. Reporting and interpreting research outcomes. Ethical issues and utilisation of research findings.

SLSP3002**Social Science and Policy Project**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: SLSP2002, SLSP3000, SLSP3001

Students undertake a major social science research project in one of several policy areas. The project involves bringing together the research and analytical skills necessary for policy-related work and will involve students in all phases of the project. This includes preparation of a literature review and a research proposal, the conduct of research, and the writing of a report embodying the results of the research.

SLSP3911**Inquiry and Interpretation in the Social Sciences**

School of Social Science and Policy

UOC6 HPW3

Prerequisite: SLSP3000, SLSP3001

Examines the conceptual foundations of the social sciences both historically and currently, to provide an understanding of the theoretical dimensions of social science research and their methodological implications.

SLSP4000**Social Science and Policy Honours (Research) Full-Time**

School of Social Science and Policy

UOC24 HPW5

Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4050**Social Science and Policy Honours (Research) Part-Time**

School of Social Science and Policy

UOC12 HPW3

Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4100**Policy Studies Honours (Research) Full-Time**

School of Social Science and Policy

UOC24 HPW5

Prerequisite: 54 units of credit at 65% including SLSP1002, SLSP2000, SLSP2002, SLSP3000, SLSP3911 and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4150**Policy Studies Honours (Research) Part-Time**

School of Social Science and Policy

UOC12 HPW3

Prerequisite: 54 units of credit at 65% including SLSP1002, SLSP2000, SLSP2002, SLSP3000, SLSP3911 and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4500**Combined Social Science and Policy Honours (Research) Full-Time**

School of Social Science and Policy

UOC12 HPW2

Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to complete a research and seminar program acceptable to both Social Science and Policy and the other school/department.

SLSP4550**Combined Social Science and Policy Honours (Research) Part-Time**

School of Social Science and Policy

UOC6 HPW2

Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to complete a research and seminar program acceptable to both Social Science and Policy and the other school/department.

SOCA1002**Australian Society**

School of Sociology and Anthropology

UOC6 HPW3

Excluded: SOCI1232

In exploring some of the major dimensions of Australian society, this introductory course analyses the institutional patterns from a range of sociological perspectives. Topics covered include: family and intimacy, youth and identity, poverty, unemployment, the influence of the media and the global context of Australian social life.

SOCA1004**Relationships: Sociology and Everyday Life**

School of Sociology and Anthropology

UOC6 HPW3

Excluded: SOCC1231, SOCI1230

Works through longstanding concerns of sociology with the qualities of self and sociality, with what it means to live in relation to others. Aims to enhance the productive tension between ways of knowing and ways of living and to teach particular skills in reading, writing and researching. Among the topics considered are ritual, passion, intellectuality, enchantment, estrangement, play, inspiration, sympathy and humility. Among the theorists are Durkheim, Sartre, Bachelard, Simmel and Buber.

SOCA1005**Australia's Media: Sociological Perspectives**

School of Sociology and Anthropology

UOC6 HPW3

Excluded: SOCC1531, SOCA3900

Introduces students to theoretically informed examination and analysis of the mass media based upon sociological intellectual traditions which address the mediation of social relations, the social construction of everyday life and the formation of socially constructed and culturally inflected personal and collective identities. Explorations of newspapers, television, film and electronic communications set in the context of patterns of ownership and control produce new understandings of culture, ideology and social processes.

SOCA1006**Introduction to Globalisation**

School of Sociology and Anthropology

UOC6 HPW3

Excluded: GLST1100, INST1003

Considers how the transnational flows of people, goods, culture and capital are changing the significance of locality and national societies in shaping social life. Examines questions of belonging by looking at migration, refugees and citizenship. Looks at the emergence of global culture through a study of the emergence of global and multicultural cities, new patterns of consumption for pleasure, and the role of media and communications in globalisation. Explores the issues of global governance and examines the cultural and political responses to globalisation in anti-globalisation movements, fundamentalism and economic strategies.

SOCA2103**Globalisation and Fragmentation**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: INST2200

Examines the effects of globalisation on peoples' lives in different parts of the world. Explores the impact of transnational flows of culture, goods, technology and power and their impact on local worlds. Explores concepts such as: globalised culture, identity, frontiers, diaspora, de-territorialisation, virtual communities, the commodification of health and bodies, the formation of global multicultural cities, globalised religion, the experience of war and destabilised states, risk and vulnerability, new forms of sociality, human rights as a global discourse and social futures.

SOCA2104**Technology, Work, Culture**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3813

An introduction to sociological debates about the relationship between technological innovation, including especially that within the field of communications, and broader aspects of social life. Particular emphasis is placed on the theoretical and practical problems which result when the celebration of technological innovation is regarded as an explanation in itself. Includes an examination of such issues as the sociology of the future (including the future forms of work and leisure), the social role of aesthetic avant-gardism, the post-industrial society and information society (or superhighway) theses, competing conceptions of social change (e.g. technological innovation vs social movements), technological convergence and communications policy, and the social and political environments of policy-making.

SOCA2106

Cities: Experiencing Sydney

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2029, SOCC2703

Focuses on experiences and representations of cities. It is concerned with how the city has become the archetypal site and sign of modernity, and with how spatiality is now central to how cities are lived and imagined. Looks at the city as the site of social transformation in the twentieth century and the tensions between order and disorder. Explores images of the city as the site of liberal and radical utopian dreams as well as the promise and disaster of cities. The changing landscapes of the city are investigated through examples such as streets, crowds, light/darkness, gardens, museums and shopping malls.

SOCA2108

Social Anthropology: Diversity, Difference, Identity

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI2301, SOCI3709

Diversity, difference and identity have been at the core of social anthropology as a discipline since its inception. Foundations of social anthropology, its core concepts and contemporary theoretical approaches are examined using examples from Australia and the Asia-Pacific Region. Tensions between the local and the global, sexuality, belief, modes of exchange, the role of secrets, the cultural treatment of the body, work and leisure and communication focus the readings and lectures, including audio-visual material.

SOCA2110

Anthropology, Identity and the Cinema

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit

Examines a range of films from an anthropological perspective and how particular cultures are represented, paying particular attention to the privileged gaze and the hegemonic (re)construction of cultural identities. Covers various topical areas including Orientalism, nationalism and violence, feminism, hyper-masculinity, post-modern alienation and nostalgia.

SOCA2204

Anthropology Research Fieldwork

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT1204, GENT1205, SOCI3710

Provides training in and use of ethnographic fieldwork methods in the context of a developing country with an understanding of village vs urban life and how development organisations impact. Ethnography is a part of the methodology of both sociology and anthropology as well as other social science research. Interview techniques and technologies, cultural mapping, methods of recording field data and participatory community development research are amongst the procedures to be explored. Field visits to regional, government and non-government organisations form a part of the research to understand how such institutions impact on village life.

Note: Taught in November-December. Students must contact Grant McCall (G.Mccall@unsw.edu.au) prior to the commencement of Session Two.

SOCA2205

Society and Desire

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCC2201, WOMS2005

The subject of desire is an especially curious one because it makes us think about the nature of the human condition. The perception of difference is an erotic process through which we are forged as bodily beings whose identities are constantly shifting. Explores how our sense of self emerges in relation to others. How we divide our own bodies into alien parts that may delight or repulse us is part of a larger social process that includes how we experience the world, how we live our sex, sexuality and cultural difference. Will draw on several continental thinkers.

SOCA2206

Embodiment

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCC2501, WOMS2106

We are lived bodies inhabiting a world. Addresses a range of themes which emerge when we reflect upon ourselves in this way: I am a body, yet I have a body; my body is always in communication with a world, I am both sentient and sensible; I am both bounded and open. Consideration of such themes requires an investigation of theoretical constructs of the social and cultural formations of embodied subjectivity, the relations of consciousness and flesh, habit and inhabitation, the significance of body image, relationality and emotions. Major theorists include Merleau-Ponty, Foucault, Douglas, Turner, Bachelard and Lingis. Case studies such as reproduction, sacred and profane bodies, bodybuilding and anorexia, dissociation and disembodiment, illness, will be used to enable students to reflect upon their own embodied experience, to examine critically everyday and theoretical assumptions, and to develop skills in qualitative analysis.

SOCA3103

Professions: Disciplines, Knowledge and Power

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI2302, SOCC2602

Professions create a culture and command a discourse which authorise their practitioners to work in fields significant often critical, in the everyday life of persons, societies and nations. Drawing on disciplines of training, practice and expertise they can exert pervasive and persistent influence on the way we live and represent ourselves. Takes up ideas and theories from Foucault, Durkheim, as well as Carol Smart, E. Freidson and other contemporary writers and applies them to current practices (and malpractices) in professional environments. As concluding assignment students can undertake a theoretically informed empirical investigation of professional practice.

Note: Offered by distance mode. Students attend a two hour introductory meeting on the commencement day. All further work is done via the internet. Students should consult the online timetable for further details.

Contact: Frances Lovejoy <f.lovejoy@unsw.edu.au>

SOCA3104

Global Migration, Global Refugees

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 12 units of credit in Level 1 Sociology and 36 units of credit overall; Excluded: SOCC2702

Considers both voluntary and involuntary migration: from business migration and family reunion to various forms of exile and refugee flows. The social consequences of migration on the host society, the country of origin, and the migrant will be examined in light of questions of human solidarity, neighbourliness and justice.

SOCA3203

Oceanic Societies: Pacific Island Living

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3702

Provides students with the historical and intellectual context of the study of the Pacific Islands, including the conceptual and theoretical tools needed to comprehend the more than one thousand societies and cultures there. The broad outlines of the waves of human settlers in the region are explored, followed by discussions of specific topics, in selected locales, that best represent the rich diversity of the region. Topics include suicide, art and creativity, religion and sorcery, chieftainship, relations with the environment and how islanders see themselves in their worlds.

SOCA3206**Anthropology of Celebration**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit

Presents a series of key debates in the social anthropological literature of the last decade with the common theme of understanding celebration and the crucial role of play in human culture, inspired by Huizinga's concept of "homo ludens". Festivals, carnival, religious and secular ceremonial, rites of passage in culture and individual identity, global sport, visual anthropology, food, music and dance performance are some of the celebrations examined.

SOCA3208**Colonisation and Indigenous Identity Formation**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI3001, SOCC3701

Investigates the formation of contemporary Indigenous identities in the context of the ongoing colonisation of Australia. Explores the interplay between culture and identity and analyses the various historic and academic constructions of Aboriginality. The history of imposed colonial notions of Aboriginal identity and their consequences for both Aboriginal people and non-indigenous Australians are identified and examined. The use of contemporary media such as film, television, literature and art are examined as case studies in the analysis of contested identities.

SOCA3209**Indigenous Australia: Gendered Identities**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI3002, AUST2012, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and the present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race, and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

SOCA3210**Whiteness Beyond Colour: Identity and Difference**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: ATSI3005

Whiteness is generally assumed to be the norm in classifying difference. It is also assumed to be neutral. Delves into whiteness as a mode of identification and whether it can be assumed to be the norm as well as neutral. Topics include whiteness as Other, whiteness as a non-Indigenous identity, and whiteness in coloniser societies. Explorations of whiteness as a representation of oppression and as transformation will be addressed.

SOCA3211**Development and Modernity**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit

Investigates the parameters of contemporary development and the ways they affect our lives and the lives of others. Takes a historical approach to examine how the 'development project' arose out of the decline of colonialism and the rise of the Cold War, and how this 'project' was eventually supplanted by a quite different set of processes. Covers various topical areas including population pressures, urbanisation, the world food crisis, women and the international division of labour, foreign aid and NGOs, sustainable development, and the ethics of intervention.

SOCA3212**Environment, Society and Culture**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit

Examines environmental issues from a sociological viewpoint, analysing the social causes and consequences of resource scarcity and environmental degradation, and looks at societal responses to those problems. From this perspective, environmental problems are viewed

as social problems, requiring an understanding of the social conditions that produce environmental problems and affect the extent and nature of solutions to them. Topics include who defines environmental problems; economic production practices; environmental movements; the global nature of environmental problems; environmental policy; a history of human modes of production and consumption; the role of culture in environmental problems; environmental justice; and environmental sustainability.

SOCA3301**Critical Reason: Modern Sociological Theories**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 6 units of credit in Level 1 Sociology and 36 units of credit overall; Excluded: SOC13502

On the basis of classical sociological theory, proceeds to an in-depth elaboration of some of the most significant theoretical trends (e.g. phenomenology, structuralism, psychoanalysis, critical theory) and their place in the study of society.

SOCA3407**Australian Migration Issues**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2011, GENT1209, SOC13614

An examination of racial, ethnic and social issues surrounding migration to Australia. Topics include an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

SOCA3409**Crime, Gender and Sexuality**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GENT1207, WOMS2007, WOMS3006

Examines social implications of: the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests; the intersection of criminality and sexuality (specific examples may include pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, underage pregnancy). Notions of public interest, privacy and consent in matters of gender and sex. The interaction of gender and sexuality with other stratification factors such as age, class, disability, ethnicity and race in the social construction of crime.

SOCA3410**Deviance**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA2208

Examines a variety of definitions of deviance to include both legally proscribed activities such as arson, vandalism, and assault; and socially sanctioned activities, states and phenomena such as rudeness, promiscuity, acne, obesity, stupidity, pollution and pornography. Reviews theories of how deviance is maintained or controlled. Considers the making, changing and breaking of rules in society, especially in times of social change when new forms of deviance may emerge (eg smoking, sexual harassment) or other activities gain social acceptance (eg higher education for women, ethnic diversity).

SOCA3411**Forensic Sociology: Evidence, Implication and Responsibility**

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit

Explores the similarities between sociology and crime scene investigation by examining how isolated and seemingly random pieces of data are actually embedded in larger frames of social and informational significance. Considers how these larger patterns of association can provide predictive relevance and meaning. Beginning with Durkheim's foundational work on suicide, the course explores the interpretive approach called semiology, the science of reading signs. Several CSI tools, such as forensic facial reconstruction and fingerprinting, illustrate the empirical and philosophical implications of this method.

SOCA3605**Quality of Life in Australia**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3507

Investigates economic and social contributions to life satisfaction, quality of life and happiness over the life-cycle. Looks at friendship, leisure, income, family, employment, consumption and health, and at different values and constructions that are placed on these factors by individuals, communities, socio-economic groupings and policy makers. Connects with competing understandings of the self and its relation to legal and economic systems and examines the consequences for identity, trust, citizenship, and rights in Australian society.

SOCA3607**Sociology of Ageing**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit

Considers historical legacies in social attitudes to ageing; wider economic and political processes such as the role of the state and social policies concerned with aged care, health and pensions; media representations of ageing; implications of an ageing workforce; consumer, attitudinal and political preferences of various aged cohorts; and new family and intergenerational relationships. Of particular relevance for students with interests in public policies and services for an ageing society. Addresses the professional interests of people who work in gerontology and public health, aged care, superannuation and retirement income consulting.

SOCA3702**Social Power: Theories and Structures**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3504

The main aims include: to acquaint the students with some of the most significant ongoing theoretical debates on power, its forms and structures; to sensitise them to the more subtle or inconspicuous forms of power, and to provide them with the skills necessary for the conceptualisation of the everyday phenomena of power.

SOCA3703**Nationalism, Citizenship and Cultural Identity**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3506

Explores different forms of contemporary nationalism, its main sources, various levels of its construction, and its political employment. Investigates the resurgence of nationalism against the background of globalisation and the connected processes of dislocation and relocation. Focuses on the numerous antinomies resulting from these processes, including that between democratic citizenship and formation of collective and individual identities. Addresses some of the theoretical perspectives concerning the potential of multiculturalism for the formation of non-exclusive, open identities.

SOCA3806**Medicine, the Body and Culture**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCI3604

Presents an overview of sociological and cultural studies of the relationship between medical knowledge and practice, the experience of health and illness and contemporary society. Focuses particularly on the ways medicine affects the experience, understanding and performance of the body; the effect of medical intervention on the organisation of sexuality, illness and aging; the decentralisation of medical knowledge and the changing status of the doctor-patient relationship.

SOCA3912**Risk and Trust in Modern Societies**

School of Sociology and Anthropology
UOC6 HPW3

Prerequisite: 36 units of credit including at least 6 units of credit in Sociology at credit level; Excluded: SOCA3302, SOCI3508

Detached from local contexts, mechanisms of risk-production are increasingly impersonal. Responsibility for managing risk is assumed by the same powerful agencies that create it, while traditional structures of

risk-containment (such as kinship, locality, and religion) are dissolving. This process poses questions about how people cope with risk and about new forms of social solidarity that might support social trust and confidence.

SOCA4000**Sociology Honours (Research) Full Time**

School of Sociology and Anthropology
UOC24 HPW5

Prerequisite: 54 units of credit in SOCA at 70% average including 12 upper Level in the SOCA3810 - 3915 range

The Honours program consists of research and writing a thesis and coursework. The thesis is a sustained research project which produces an Honours thesis of approximately 16,000 - 20,000 words. Coursework for Honours consists of two compulsory Honours seminars and a thesis research and writing workshop.

Note: Before enrolling in the Honours program, students are required to attend an interview about their proposed research with the Honours coordinator.

SOCA4050**Sociology Honours (Research) Part Time**

School of Sociology and Anthropology
UOC12 HPW3

Prerequisite: 54 units of credit in SOCA at 70% average including 12 upper Level in the SOCA3810 - 3915 range

In special circumstances, students may be permitted to enrol in an Honours program on a part-time basis. Students will thus complete their Honours program over the course of two years. This program consists of research and writing a thesis and coursework. The thesis is a sustained research project which produces an Honours thesis of approximately 16,000 - 20,000 words. Coursework for Honours consists of two compulsory honours seminars and a thesis research and writing workshop.

Note: Before enrolling in the Honours program, students are required to attend an interview about their proposed research with the Honours coordinator.

SOCA4500**Combined Sociology Honours (Research) Full-Time**

School of Sociology and Anthropology
UOC12 HPW2

Prerequisite: 48 units of credit in SOCA at 70% average including 6 upper level in the SOCA3810 - 3915 range

This program, designed by the relevant units in consultation with the student, is usually a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

Note: Students who have also qualified to read for a degree at Honours level in another school/department may, with the permission of both units, seek to read for a Combined Honours degree. The program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

SOCA4550**Combined Sociology Honours (Research) Part-Time**

School of Sociology and Anthropology
UOC6 HPW2

Prerequisite: 48 units of credit in SOCA at 70% average including 6 upper level in the SOCA3810 - 3915 range

This program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

Note: In special circumstances, students may be permitted to enrol in a combined Honours program on a part-time basis. Students who have also qualified to read for a degree at Honours level in another school/department may, with the permission of both units, seek to read for a Combined Honours degree. The program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and

thesis work, students are required to attend and contribute to regular thesis workshops.

SOCW1001

Introduction to Social Work

School of Social Work
UOC6 HPW3

Provides an overview and rationale for the BSW curriculum. Students are introduced to the scope and parameters of the social work profession, the diversity of levels and contexts of intervention, the range of theory and knowledge that informs social work practice, and the code of ethics that guides professional intervention. A variety of case studies and scenarios are used to illustrate this material. To reinforce the links between conceptual knowledge and practical application, contact will be made with a range of relevant agencies.

SOCW1002

Communication and Social Work Practice

School of Social Work
UOC6 HPW3

Excluded: Students enrolled in Program 3970 (Bachelor of Science) and Program 3972 (Bachelor of Advanced Science) are not permitted to enrol in this course.

Provides an understanding of theories of communication and their application in the context of social work practice. Includes selected communication skills exercises. Provides an awareness of the ways effective communication can be used to achieve particular outcomes. Exploration of professional and personal value systems in relation to social work codes of ethics.

SOCW1003

Human Behaviour 1 (Life Stress and the Life Span)

School of Social Work
UOC6 HPW3

Excluded: Students enrolled in Program 3970 (Bachelor of Science) and Program 3972 (Bachelor of Advanced Science) are not permitted to enrol in this course.

Looks at theories of stress which have influenced the way the topic is researched and applied today. The main theoretical underpinnings are critically examined for their relevance to particular types of stress or events and applicability across the life span. The role of the individual, the nature of coping and the relative importance of biological and environmental factors are explored. Also examines the theoretical underpinnings and empirical evaluation of stress management techniques.

SOCW2001

Human Behaviour 2 (Physical and Psychological Health)

School of Social Work
UOC6 HPW3

Sustains the biopsychosocial framework of Human Behaviour 1 to examine factors which influence the maintenance of health and the development of illness. The contribution that major theories of human behaviour make to our understanding of health and illness are critically evaluated. Interdisciplinary theoretical and empirical contributions are used to examine a range of themes related to health and illness. Social factors which influence our view of health, the disorders we research and the theories we accept are examined.

SOCW2002

Society and Social Work 1

School of Social Work
UOC6 HPW3

Explores the nature of society and the interrelationship between conceptual knowledge and social work practice with the emphasis on the Australian context. Students will examine concepts, theories and key social trends related to social work.

SOCW2003

Social Work Practice: Individuals, Families & Groups 1

School of Social Work
UOC6 HPW3

Prerequisite: SOCW1001 and SOCW1002

Builds on the methods of social work practice that students were introduced to in earlier courses, namely counseling individuals and families and working with groups. Explores the referral context, assessment frameworks, contracting processes and termination as issues common to

working with individuals, families and groups. Aims to equip students with skills of engagement, exploration and case management. Focuses on understanding models of group work, group development and process. Encourages critical appraisal of models of direct practice.

SOCW2004

Society and Social Work 2

School of Social Work
UOC6 HPW3

Explores further the study of social and political institutions and structures and their effect on social work. Builds on the use of theory to understand the link between policy and practice in diverse public and private arenas. Identifies crucial factors in the distribution of resources, status and power. Provides a foundation for the study of Social Policy 1 and 2.

SOCW2005

Research for Social Work

School of Social Work
UOC6 HPW3

Looks at the nature of research - in particular, research in a social context. Aims to equip students with basic skills in research design, data collection and analysis. In addition, the course presents concepts that will enable students to critically evaluate others' research. Covers information on descriptive and experimental research, and qualitative and quantitative approaches to design and analysis. Students will learn to apply basic techniques of data analysis, including inferential and descriptive statistics.

SOCW2006

Social Work Practice - Community Work

School of Social Work
UOC6 HPW3

Prerequisite: SOCW1001 and SOCW1002

Analyses and critiques models and theories of community work within the contemporary social policy and economic and political context. Skills and knowledge required for effective practice are pursued. An emphasis is placed on issues of power, powerlessness and the collective processes that empower marginalised communities.

SOCW2007

Social Work Practice - Bridge

School of Social Work
UOC3

Corequisite: SOCW2003

Through a set reading program, students are introduced to the scope and parameters of the social work profession, the diversity of levels and contexts of intervention, the range of theory and knowledge that informs social work practice, and the code of ethics that guides professional intervention.

Note: Students who enter the BSW program with advanced standing take this course.

SOCW2100

Aboriginal People and Social Work

School of Social Work
UOC6 HPW3

Prerequisite: Enrolment in program 4031 or 4035 or 4036 or 4785; Excluded: ATSI3004

Examines the history and current legacy of colonisation and government policies for Indigenous Australians and their position in contemporary Australian society. Social movements and actions relevant to Indigenous Australians' social experience will be discussed. Addresses in particular the skills social workers need to work with Indigenous clients and what role social work can play in progressing equity and social justice for Indigenous Australians.

SOCW3001

Social Work Practice - Third Year Practicum

School of Social Work
UOC12

Prerequisite: SOCW2003, SOCW2006; Corequisite: SOCW3002

Students are allocated to a social welfare agency to undertake field-based learning under the supervision of a qualified field educator. Placements occur in a range of traditional and contemporary settings and contexts, such as hospitals, local governments, state and federal government departments, as well as non-government, community based organisations. Performance is monitored and assessed by the university, in consultation

with the field educator and student. This placement begins in mid-January with a six-week full-time block period, then reduces to three days a week during Session 1.

SOCW3002

Social Work Practice: Individuals, Families & Groups 2

School of Social Work

UOC6 HPW3

Prerequisite: SOCW2003, SOCW2006

Examines direct practice within agency contexts and explores a range of models for working with individuals, families and groups. The systemic approach to understanding patterns of interaction and relationships provides an overarching framework for intervention choices applicable to individuals, families and groups. Focuses on students developing skills in group leadership and facilitating change processes with individuals and families.

SOCW3004

Social Policy 1

School of Social Work

UOC6 HPW3

Basic Sociology is assumed for this course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Policy analysis frameworks are introduced along with perspectives from various policy theorists and analysts. These are applied in the detailed discussion and analyses of major policies in policy domains such as health, housing, urban and regional, finance, transport and criminal justice. Comparative policy studies are used in several of these critical analyses.

SOCW3005

Research Honours

School of Social Work

UOC6 HPW4

Offered as a pre-Honours course. Students are introduced to various forms of experimental, qualitative and survey research designs, forms of data collection and the development of measuring devices. Investigates validity and reliability concepts and correlation analysis and prediction of problems. Introduces multivariate analysis. Part of class time is allocated to working on individual project designs.

SOCW3006

Socio-Legal Practice in Social Work Settings

School of Social Work

UOC6 HPW3

Explores the legal, professional and ethical opportunities and constraints of social work practice. Includes a consideration of the tensions and dilemmas of socio-legal practice through an examination of social work interventions in selected settings. Attention is paid to legal systems, legal concepts, law making processes, and sources of legal assistance and interactions between social workers and lawyers.

SOCW3007

Research Methods 2

School of Social Work

UOC6 HPW3

Various forms of experimental, qualitative and survey research designs. Forms of data collection and the development of measuring devices. Validity and reliability concepts. Correlation analysis and prediction problems. Introduces multivariate analysis. Part of class-time is allocated to working on group assessment.

SOCW3008

Social Work Practice - Selected Studies 1

School of Social Work

UOC6 HPW3

Prerequisite: SOCW3001, SOCW3002

Students select from a range of specialised modules that build on the methods-based input of earlier practice courses. The range of topics varies from year to year, depending on staff availability and student interest.

SOCW4002

Social Work Practice in Organisations

School of Social Work

UOC6 HPW3

Prerequisite: SOCW3001, SOCW3002, SOCW3008

Provides a critical and practical examination of social work practice in organisations. Introduces organisational and management theories and considers their relevance for social work settings. Examines the tensions inherent in professionalism and contemporary ideas about management and the management of change in organisations and the importance of planning and evaluating for change. Explores strategies for effective and ethical practice in organisations are examined. Issues-based and experiential learning provides a basis for the development of organisational skills, such as skills in negotiation, teamwork, program planning, supervision and the management of information.

SOCW4003

Social Work Practice - Selected Studies 2

School of Social Work

UOC6 HPW3

Prerequisite: SOCW3001, SOCW3002, SOCW3008

Students take a second selected studies component to complement that taken in SOCW3008.

SOCW4004

Social Philosophy

School of Social Work

UOC6 HPW3

Introduces students to the basics of moral philosophy in the first part of the course and builds upon this in dealing with political philosophy in the second part. Begins with moral reasoning and moral theory and these topics introduce students to some of the central thinkers and the doctrines which have shaped modern understandings of ethics.

SOCW4005

Social Policy Honours

School of Social Work

UOC6 HPW4

Prerequisite: SOCW3005

Offered as a pre Honours course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Introduces students to the social policy processes of formulation, implementation and evaluation. Processes and elements of the policy analysis framework are utilised to closely examine some social policy domains (eg social security, education, employment) as well as the impact of several policies on the patterns of welfare experienced by people within major population groupings (eg immigrants, Aboriginal and Torres Strait Islander peoples).

Students examine theories relevant to social theory, social work practice and intervention, and relate these to their research project design.

SOCW4006

Social Policy 2

School of Social Work

UOC6 HPW3

Basic Sociology is assumed for this course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Introduces students to the social policy processes of formulation, implementation and evaluation. Processes and elements of the policy analysis framework are utilised to closely examine some social policy domains (eg social security, education, employment) as well as the impact of several policies on the patterns of welfare experienced by people within major population groupings (eg immigrants, Aboriginal and Torres Strait Islander peoples).

SOCW4010

Social Work Practice - Fourth Year Practicum

School of Social Work

UOC24 HPW35

Prerequisite: SOCW3001, SOCW4002, SOCW4003; Excluded: SOCW4001

Building on the first placement experience, students are placed in a different social welfare agency to develop additional competencies and further enhance those already mastered at a basic level. By the end of this placement students need to demonstrate satisfactory performance in the full range of required competencies. Students are consulted about placement allocations. The placement is undertaken as a full-time block period, beginning in mid-July and extending throughout Session 2.

SOCW4800

Honours Thesis

School of Social Work

UOC24

Prerequisite: 144 units of credit in SOCW, at an average of 70% or higher, including SOCW3005 & SOCW4005 and permission from Head of School

Students work individually on an approved thesis topic in consultation with appointed supervisors. Students are required to attend prescribed seminars. The completion of this course is the submission of an acceptable honours thesis of 12,000-15,000 words at the end of session.

SOLA1050

Introduction to Photovoltaics, Solar Energy and Computing 1

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of solar cells and their applications with emphasis on visual presentations and interesting case histories. The interesting area of “solar cars” is considered in detail as an example of a high profile application of photovoltaic (PV) devices and systems that deals with state-of-the-art technology. Students will also gain experience in computer programming particularly with the C++ language. Trends in the PV industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by PV engineers including manufacturing, research, system design, system analysis and fault diagnosis, policy and analysis, marketing, quality control and testing, training/education, maintenance, electronics design and interfacing, etc. In general, one lecture each week will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of photovoltaics that are covered in this degree program.

SOLA1051

Introduction to Photovoltaics, Solar Energy and Computing 2

School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of solar cells and their applications with emphasis on visual presentations and interesting case histories. The interesting area of “solar cars” is considered in detail as an example of a high profile application of photovoltaic (PV) devices and systems that deals with state-of-the-art technology. Trends in the PV industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by PV engineers including manufacturing, research, system design, system analysis and fault diagnosis, policy and analysis, marketing, quality control and testing, training/education, maintenance, electronics design and interfacing, etc. In general, one lecture each week will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of photovoltaics that are covered in this degree program.

SOLA1055

Introduction to Renewable Energy Technologies 1

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of the various renewable energy (RE) technologies and their applications with emphasis on visual presentations and interesting case histories. The interesting area of “solar cars” is considered in detail as an example of a high profile application of a Renewable Energy system that deals with state-of-the-art technology. Trends in the RE industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by RE engineers including manufacturing, research, system design, system analysis & fault diagnosis, policy & analysis, marketing, quality control & testing, training/education, maintenance, electronics design & interfacing, etc. Students will learn about the importance of computers to the RE industry and receive a basic grounding in programming and CAD packages. Many lectures will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of Renewable Energy that are covered in this degree program.

SOLA1056

Introduction to Renewable Energy Technologies 2

School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of the various renewable energy (RE) technologies and their applications with emphasis on visual presentations and interesting case histories. The interesting area of “solar cars” is considered in detail as

an example of a high profile application of a Renewable Energy system that deals with state-of-the-art technology. Trends in the RE industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by RE engineers including manufacturing, research, system design, system analysis & fault diagnosis, policy & analysis, marketing, quality control & testing, training/education, maintenance, electronics design & interfacing, etc. Students will learn about the importance of computers to the RE industry and receive a basic grounding in programming and CAD packages. Many lectures will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of Renewable Energy that are covered in this degree program.

SOLA1060

Chemical Processes for Renewable Energy Systems

School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

Introduction to the chemical processes associated with photovoltaic devices and systems with particular emphasis on the fabrication of solar cells. Revision of high school chemistry and its relevance to photovoltaic devices and corresponding systems. Revised material includes: atomic and molecular structure and bonding; chemical equilibrium; rates of reactions; ionic equilibria; metals, electrochemistry and corrosion; electrical properties of materials including metals, insulators and semiconductors. Emphasis will be placed on the application of these chemical principles to photovoltaic engineering. Examples include: junction formation through doping in semiconductors; oxidation and reduction reactions in semiconductor processing; corrosion in photovoltaic systems leading to a study of cathodic protection and life expectancy; storage of energy; and chemical handling and safety.

SOLA1172

Solar Architectural Technologies

School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW6

Introduction to solar architecture principles for engineers. The use and effectiveness of electricity generation from renewable energy sources in buildings and domestic housing are considered in relation to energy efficient housing and effective solar utilisation. This course includes the material and lecture program from ARCH1172 “Architectural Technologies 2”.

SOLA2020

Photovoltaic Technology and Manufacturing

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

Sufficient theory relating to the operating principles of solar cells is covered to give an appreciation of the strengths and weaknesses of the dominant commercial cell technologies. Trends in commercial cell technology and the corresponding manufacturing processes and environment are considered. The impact of various processing and device parameters on performance, yields and product reliability are studied. Insight is given into complete production processes for both screen-printed solar cells and buried contact solar cells. In-line quality control techniques are studied with laboratory classes used to give students first-hand experience in their use as well as exposing them to manufacturing processes. Students will also be given the opportunity to take control of the “virtual production line” to adjust the equipment controls and processing parameters to try and optimize performance and maximize yields, etc. In-line quality control procedures are available to the student to aid in this optimization and will prove to be particularly useful in identifying and rectifying computer generated faults associated with the production. Other laboratory work focuses on the use, measurement and analysis of encapsulated modules of cells. Modules with a range of faults are examined and techniques for fault diagnosis developed.

SOLA2051

Project in Photovoltaics and Solar Energy 1

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW5

Satisfactory performance in SOLA2051 is a prerequisite for progress to SOLA2052. Each student is required to prepare for assessment a project proposal as part of the requirements for SOLA2051.

SOLA2052

Project in Photovoltaics and Solar Energy 2

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW5

To be completed sequentially with SOLA2051. The main emphasis of this course is hands-on “projecteering”, or project engineering.

A wide range of projects is made available for students or groups of students, and new projects regularly become available, giving students some degree of choice.

Examples of projects include monitoring and analysing existing installations, installing new PV, thermal solar, wind or micro-hydro generation systems, developing educational multimedia presentations, system design, modelling, developing country applications of renewable energy, biodiesel manufacturing and solar cell laboratory projects.

Each project will have a research component, a planning component, a hands-on component and a reporting component and may involve a peer-reviewed oral presentation component.

Lectures covering projecteering skills and practice are given in the early weeks, after which students work closely with their nominated project supervisor on their projects. A written project report must be submitted on each project to satisfy the requirements for SOLA2052.

SOLA2053

Sustainable & Renewable Energy Technologies

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This course includes an introduction into issues in sustainable and renewable energy, including environmental impact, basic engineering economic analysis, energy payback time, embodied energy and the context of energy systems within a social framework. Included in the course is an overview of existing energy systems and sustainability issues with these systems. The course will examine renewable energy sources and generation systems, including an overview of wind, solar thermal, photovoltaics, hydro, geothermal design skills and creative thinking.

SOLA3010

Photovoltaics in the Built Environment

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

There is currently significant interest in reducing energy use and greenhouse gas production in buildings by designing buildings that are climate-appropriate, implementing energy efficiency measures and producing energy from renewable sources. Photovoltaics (PV) is one of the few renewable electricity generation options that can be readily used in urban areas and has no environmental impacts at the site. This course will examine the use of PV in the urban environment, with a particular focus on the integration of PV modules into the building envelope. The design of energy efficient buildings, building thermal and lighting performance and solar access will be introduced as an appropriate context for the use of PV. A competency in the use of building energy simulation software will be developed. Technical issues associated with the use of PV in buildings and the urban environment, such as heat transfer processes, partial shading and mismatch and system siting, sizing and configuration will be investigated. Students will tackle urban design problems that require balancing architectural and human requirements with the functional constraints of PV technology. Examples of PV products for buildings and the urban environment will be studied and system performance assessment and prediction will be introduced.

SOLA3540

Applied Photovoltaics

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

The use of solar cells (photovoltaic devices) as electrical power supplies based on the direct conversion of sunlight into electricity. The emphasis is placed on applications including system design and construction, although the properties of sunlight, the operating principles of solar cells and the interaction between sunlight and the cells are also treated.

SOLA4910

Thesis Part A

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW6

SOLA4911

Thesis Part B

School of Photovoltaic and Renewable Energy Engineering
UOC12 HPW12

The Thesis Project (Parts A and B) is carried out in the last two sessions of the BE degree course for full-time students. Six hours per week in the first session, and twelve hours per week in the second session are devoted

to directed laboratory and research work on an approved subject under guidance of members of the lecturing staff. Part-time students may need to attend the University full-time in their final session or attend for one further part-time session, if facilities are not available for the thesis to be done at their workplace. Typically, the thesis involves the design and construction of experimental apparatus together with practical tests. Each student is required to present a seminar as part of the requirements for SOLA4910, Thesis Part A. Satisfactory performance in subject SOLA4910 is a prerequisite for progress to subject SOLA4911. A written thesis report must be submitted on each project by the Tuesday of the 14th week of the second session of enrolment to satisfy the requirements for SOLA4911, Thesis Part B.

SOLA4912

Thesis in Renewable Energy Engineering Part A

School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW8

SOLA4913

Thesis in Renewable Energy Engineering Part B

School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW8

SOLA4914

Group Thesis Project Part A

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW6

SOLA4915

Group Thesis Project Part B

School of Photovoltaic and Renewable Energy Engineering
UOC12 HPW12

The Thesis Group Project is carried out in the last two sessions of the BE degree course for full-time students. Six hours per week in the first session, and twelve hours per week in the second session are devoted to directed laboratory and research work on an approved subject under guidance of members of the lecturing staff. Part-time students may need to attend the University full-time in their final session or attend for one further part-time session, if facilities are not available for the thesis to be done at work. Generally, the thesis involves the design and construction of experimental apparatus together with laboratory tests. The Group Thesis Project is for students with an NSS WAM of less than 65. Each student is required to present a seminar as part of the requirements for SOLA4914, Group Thesis Project Part A. Satisfactory performance in subject SOLA4914 is a prerequisite for progress to subject SOLA4915. A written thesis report must be submitted on each project by the Tuesday of the 14th week of the second session of enrolment to satisfy the requirements for SOLA4915 Group Thesis Project Part B.

SOLA5050

Renewable Energy Policy and International Programs

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW3

This course will review the objectives and strategies of renewable energy policies world-wide. It will examine policy drivers, including environmental impact, community service obligations and industry development, as well as policy instruments and how they are applied, including taxation, legislation, tariffs, targets and incentives. The policies and strategies will be illustrated with international case studies of renewable energy programs.

SOLA5052

Biomass

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This course will introduce a range of biomass energy sources, including forestry, wastes and crops, as well as various technologies for their conversion into useful fuels or power. The course will cover liquid and gaseous fuels, including ethanol, however, the emphasis will be on electricity generation technologies, including combustion and gasification systems, biogas and landfill gas systems, combined heat and power production.

SOLA5056

Sustainable Energy for Developing Countries

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

Prerequisite: Completion of 96 units of credit

This course covers many of the technical and non-technical issues relating to introducing photovoltaics and renewable energy systems and technology in developing countries. The course will be closely aligned with current national or international programs in developing countries, for example the IEA PVPS Task IX, PV in developing countries.

The course will cover various Recommended Practice Guides developed by industry expert groups in the areas of financing and investment mechanisms, capacity building, implementation models and quality assurance. The course will include a practical components related to design, implementation and maintenance of photovoltaic and renewable energy systems in developing countries and case studies thereof.

SOLA5058

Special Topic in Photovoltaics

School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

SOLA5059

Industrial Elective

School of Photovoltaic and Renewable Energy Engineering
UOC6

Each Industrial Elective (6 UOC) represents one year of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 UOC can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911 or SOLA4915. An Industrial Elective cannot be claimed for work submitted for credit as SOLA4911 Thesis or SOLA4915 Group Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOLA5060

Industrial Elective

School of Photovoltaic and Renewable Energy Engineering
UOC3

Each Industrial Elective (3 units of credit) represents 6 months of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 Units of Credit can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911. An Industrial elective cannot be claimed for work submitted for credit as SOLA4911 Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOLA5061

Industrial Elective

School of Photovoltaic and Renewable Energy Engineering
UOC3

Each Industrial Elective (3 UOC) represents 6 months of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 UOC can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911 Thesis or SOLA4915 Group Thesis. An Industrial Elective cannot be claimed for work submitted for credit as SOLA4911 Thesis or SOLA4915 Group Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOMA1308

Time Based Art 1B

School of Media Arts
UOC6 HPW3

The aesthetics, practice and history of media art will be introduced and developed, with an emphasis on contemporary fine art practice. Time based art practices such as: experimental film, video art, performance, time based installation, interactive multimedia and experimental sound will be explored. Concepts and techniques of spatial and temporal montage will be introduced and elaborated through technical workshops, screenings, seminars and individual project work. Video editing software will also be introduced.

SOMA1309

Photomedia 1B - Digital Studies

School of Media Arts
UOC6 HPW3

This course introduces the student to the broad experience of working with photomedia. The course emphasises the development of a keen critical awareness in students by investigating the content and context of photographic images in contemporary visual art and culture. The questions of intent, content and context are focused toward the development of the individual's visual language. The course introduces students to the basic technical concepts of digital imaging. Using digital imaging software students learn basic scanning, resolution theory, image manipulation and output. Students are encouraged to explore, experiment and develop their ideas through the completion of set projects.

SOMA1312

Photomedia 1A - Analogue Studies

School of Media Arts
UOC6 HPW3

Prerequisite: SART1303 Introductory Studies: Photomedia & Printmaking.

This course introduces the student to the broad experience of working with photomedia. The course emphasises the development of a keen critical awareness in students by investigating the content and context of photographic images in contemporary visual art and culture. The questions of intent, content and context are focused toward the development of the individual's visual language. Students explore the possibilities of image-making processes by the acquisition of basic photographic technical skills including: 35 mm camera operation, B/W and colour processing/printing and related theory. Students are encouraged to explore, experiment and develop their ideas through the completion of set projects.

SOMA1315

Time Based Art 1A

School of Media Arts
UOC6 HPW3

Prerequisite: SART1302 Introductory Studies: Sculpture & Time Based Art.

Time based art is a cluster of units dealing with the complex multiplicity of artistic forms which use the passage of and the manipulation of time as the essential element. Time Based Art 1A introduces key concepts in time based art with specific reference to experimental film, video art and installation, sound, performance and multimedia computing. The course develops critical awareness by close study of histories of the moving image and the expressive use of technology and the human body. Concurrently the subject provides preliminary technical training in the various technologies used in the production of video, sound and performance works.

SOMA1521

Introduction to Analogue Photography

School of Media Arts
UOC6 HPW3

The aim of this course is to develop skills through the direct participation in intellectual and technical processes relevant to the field, and to create Photomedia based works of an increasingly professional standard. Students explore the possibilities of image-making processes by the acquisition of basic photographic technical skills including: overview of 35mm camera operation; B/W film types and exposure; processing and printing; print finishing and presentation. This technical knowledge is advanced by the development of the student's critical awareness of contemporary visual arts practice through the completion of set projects.

SOMA1600

Language of Digital Media

School of Media Arts
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an overview of theories of language and looks critically at the way these apply to popular media in the digital age. Starting with basic principles of communication and introducing theories of semiotics, students are encouraged to critically engage with the deconstruction of media as text. Lectures in this course provide an introduction to linguistic and semiotic theory, as well as newer concepts such as memetics. Media platforms are also examined in individual lectures, ranging from comics to digital games and hypertext. In tutorials the concepts introduced in lectures are examined in more detail, and assessment is undertaken through presentation involving the examination and analysis of popular media.

SOMA1602

Web Authoring

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an introduction to the production of web pages and web sites. It covers basic web page composition, HTML, file directory organisation and the authoring and optimisation of media elements such as typography, images, sounds and animations through various software and processes. Examples of both simple and sophisticated web sites will be critiqued. The emphasis will be on creative utilisation, web interface design theory.

SOMA1603

Digital Video 1

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The course is designed to explore and expand an understanding of video production methods and practice, analogue then digital. The course is comprised of: technical demonstrations and workshops, discussions and tutorials, individual and group project development, assessment and critique, proficiency on analogue and digital editing systems will be gained in the workshop. The use of camera, lighting and sound editing will also be introduced.

SOMA1604

Introduction to Digital Media

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides a broad introduction and foundation to video, photography and sound. It will cover aspects of video capture and editing, photographic capture and manipulation and sound capture and editing. Students will learn to use basic sound recording equipment and receive an introduction to concepts of sound layering and editing. Students will be introduced to the fundamentals of the video process associated with analogue and digital technologies. An introduction to photographic process will also be covered.

SOMA1605

Lighting

School of Media Arts

UOC6 HPW3

Lighting for the digital environment workshop is designed to explore the nature of light and expand the understanding of "light" in many of its forms. Light in relation to Digital production, issues of the consistency of light the fall of light, lighting for multiple outcomes, the measurement of light, key lighting and light ratios. Colour temperature in relationship to available light, artificial light, and studio lighting tungsten and electronic. This course will seek to establish an understanding and appreciation of the roll light plays in the image making process.

SOMA1608

Digital Composite

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This subject will introduce students to the principles, techniques and applications of digital imaging technology. The central aim will be to provide students with a clear perception and appreciation of the manner in which the various discrete components of hardware and software symbiotically interact to form an effective imaging system. Practical and creative experiences will give students the opportunity to gain basic proficiency in operating industry standard packages.

SOMA1641

Video Art

School of Media Arts

UOC6 HPW3

These courses offer students the opportunity to gain an awareness of the nature and variety of experiences included in the television area, to appreciate the specific qualities and potential of the video and electronic media and to acquire the technical, intellectual and creative skills necessary for the creation of original video work. By exploration of a theoretical overview and the development of relevant skills the student will formulate and implement an extensive study of a field of practice within the area of Video.

SOMA1651

Introductory Analogue and Digital Animation and Timing Skills

School of Media Arts

UOC6 HPW3

Analogue and Digital Animation is a general introduction to various techniques and methods involved with both linear capture of pictures onto film or hard drives and other computer animation techniques. Much time is spent developing timing skills and investigating through workshops various approaches to timing. As well through a series of projects students develop a comprehensive range of approaches to computer animation.

SOMA1661

Performance

School of Media Arts

UOC6 HPW3

The course develops a strongly eclectic approach to making contemporary performance and performance art exploring anti-narrative, physical and conceptual approaches. Issues of context, audience, spatial relationships and interactivity are addressed. Various technologies and media may also be used within the project work.

SOMA1681

Introductory Multimedia Computing

School of Media Arts

UOC6 HPW3

These courses enable students to develop concepts and techniques of multimedia production which utilise the computer to assemble sound, video, text and images in order to develop interactive media which is innovative, challenging and pertinent. By exploring a theoretical overview and gaining relevant skills the student will develop original and engaging interactive works.

SOMA1810

Introduction to Computing

School of Media Arts

UOC6 HPW3

This subject covers the basic use of Macintosh computers and the Macintosh operating system. This will include disc formatting, network server storage and printing, email set-up, the Internet, using the web as a research tool and various Web utilities including NS Student. An introduction to Microsoft Office Word, focusing on the basics of formatting and COFA style requirements; an introduction to the basics of Web authoring; an introduction to Power Point; File and document management with file formats commonly used and file types to use for cross-platform applications.

SOMA2201

Landscape Animation

School of Media Arts

UOC6 HPW3

Students will be taken through a range of workshops that develop animation skills, with particular attention being paid to stop-motion techniques. Students will work in and experience the unique Australian landscape in and around historic Broken Hill. This course draws upon the aesthetics and theories of environmental sculpture and animation. The arid landscape provides an opportunity to see the essential nature

of the environment, making underlying structures visible. Traces left on the landscape by natural and manmade events are more easily seen and rendered.

The projects are developed further using digital video editing and digital video postproduction. Students will work on various individual and group projects in the field to enhance and extend their production techniques, with each student shooting, editing, and scoring animation projects. On completion of this course, students will have an understanding of the technical and aesthetic foundations of digital video production and animation.

Cost to students is approx \$480 which includes all travel, meals and accommodation. The course is run in the first week of the winter session refer to information posted by School.

SOMA2321

Photomedia 2A - Analogue Studies

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1312 or SART1402

This is a studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and analogue technical skills acquired in Photomedia 1A. Students are introduced to medium format camera operation and advanced B/W and colour darkroom processes. Students are required to have a basic knowledge of B/W and colour photography, 35 mm camera operation, film exposure, processing and print production. Students are directed towards an analysis and critical awareness of current visual arts practice, central to the production and advancement of their own work. Students are encouraged to explore, experiment and develop ideas through set projects.

SOMA2324

Time Based Art 2A

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1315 or SART1402

This course introduces the conceptual understanding and technical skills underpinning practice in time based art. Screening programs and analysis of sound, the moving image and performance augment the students knowledge of the traditions and contemporary contexts of technological and non-technological art forms. Students become familiar with the processes of video production, 16 mm cinematography and editing and/or computer-based image and sound technologies. Students are directed to develop a body of work which integrates technical and conceptual approaches.

SOMA2331

Photomedia 3A - Analogue Studies

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2321

This is an analogue studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and analogue technical skills acquired in Photomedia 1A and 2A. Students are introduced to large format camera operation and fieldwork projects. Students are required to have knowledge of basic lighting techniques, medium format camera operation and darkroom processes. Students explore a diversity of conceptual approaches, including the relationship of audience, site and context to visual art works and artist multiples/books, in order to extend their use of visual language. This conceptual and technical knowledge is advanced by the development of the student's critical awareness through set and self-initiated projects.

SOMA2334

Time Based Art 3A

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2324

This course furthers the conceptual understanding and technical skills underpinning practice in time based art. The course examines the traditions and contemporary contexts of art practices which developed in response to the mediums of film, television and multimedia. The course investigates the interactions between film, video, sound and computing technologies in time based art practices. Students develop a body of work exploring and integrating these technologies in art.

SOMA2341

Photomedia 2B - Digital Studies

School of Media Arts

UOC6 HPW3

This is a studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and digital technical skills acquired in Photomedia 1B. Students are introduced to advanced digital imaging software, image manipulation techniques, high resolution scanning and output devices, vector imaging and colour space theory. Students are directed towards an analysis and critical awareness of current visual arts practice, central to the production and advancement of their own work. Students are encouraged to explore, experiment and develop ideas through set projects. The integration of new technologies within analogue practice is explored.

SOMA2344

Time Based Art 2B

School of Media Arts

UOC6 HPW3

Students will gain the conceptual and technical skills to develop soundscapes and audiovisual soundtrack work. Technically, the following elements are covered: digital sound recording, editing and mixing; sampling; synthesis; sound design. All students will gain proficiency on the basic operation of the sound studios. Various conceptual, aesthetic and philosophical approaches to sound and sound design will be introduced through critical discussion of examples and project work.

SOMA2351

Photomedia 3B - Digital Studies

School of Media Arts

UOC6 HPW3

This is a digital studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and digital technical skills acquired in Photomedia 1B and 2B. Students are introduced to advanced imaging software, digital image capture, advanced scanning, digital composite, image manipulation techniques and output alternatives. Students explore a diversity of conceptual approaches, including the relationship of audience, site and context to visual art works and artist multiples/books, in order to extend their use of visual language. This conceptual and technical knowledge is advanced by the development of the student's critical awareness through set and self-initiated projects. Students are encouraged to explore external print bureaus for final production of their work.

SOMA2354

Time Based Art 3B

School of Media Arts

UOC6 HPW3

Expressive and technical means for creating fine art practice in time based media will be further explored and developed through an emphasis on the development of the student's individual artistic practice. A strong focus on the presentation of work will be pursued.

SOMA2521

Introduction to Studio Lighting

School of Media Arts

UOC6 HPW3

This course introduces the student to the basic analysis and control of natural and artificial light for photography. Students are instructed how to observe the quality of natural light for photography as a basis for learning basic photographic studio lighting techniques and their creative applications. The student requires knowledge of basic B/W and colour photography; 35mm camera operation; film exposure and processing; and print production. The emphasis is on the development of new technical skills central to the production and advancement of the student's work. Projects are set which focus on the production of photographic images for contemporary visual art works.

SOMA2551

Introduction to Audio

School of Media Arts

UOC6 HPW3

Excluded: SOMA2602 and SOMA2812.

Enrolment Requirements: Must be currently enrolled in a program in the College of Fine Arts.

Students will gain the conceptual and technical skills to develop either “stand alone” audio work or audio soundtracks in relation to other mediums such as video, installation and multimedia work. Technically, the following elements are covered: digital sound recording, editing and mixing; sampling; synthesis; audiovisual sound design. All students will gain proficiency on the basic operation of the sound studios. Various conceptual, aesthetic and philosophical approaches to audio practice will be introduced through critical discussion of examples and project work.

SOMA2602

Sound Media 1

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course covers all aspects of audio production relating to art works, soundtracks for film, video, performance and multimedia computing. Students are introduced to various conceptual, stylistic, aesthetic and philosophical approaches to the use of sound within art, with attention also being paid to the relationship of sound to other art practice. A screening and listening lecture program examines various sound/music pieces, installations and soundtracks.

SOMA2606

Advanced Multimedia Authoring

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2607 or SOMA1681.

Advanced Multimedia Authoring extends the students' experience gained in Multimedia Authoring 1 furthering the conceptual understanding, appreciation and technical skills underpinning interactive practice.

SOMA2607

Multimedia Authoring 1

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Multimedia authoring provides the platform for students to combine the media of sound, text, images moving and still. Interactive events are planned and structured, notions of the linear and non-linear are addressed. This multimedia-authoring course utilises multiple software programs and seeks the creative development of interactive and animated media outcomes.

SOMA2608

Digital Composite 2

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1608.

Topics to be considered include digital capture, colour theory, operation of input and output devices, image manipulation, compatibility issues relating to digital composite. The knowledge, skills and experience gained in practical and theoretical sessions will provide the understanding of the digital composite cycle. Students will apply imaging theory to optimise their digital media practice in a variety of situations across mutable media, using industry standard packages.

SOMA2609

3D Modelling and Animation 1

School of Media Arts

UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

This course is an introduction to the many operational elements within 3D. Students will be introduced to the fundamentals of 3D modelling, texturing, lighting and animation. The integration of 3D into other digital media will be explored. Emphasis is placed on establishing good working studio practices.

SOMA2610

Writing for the Digital Media

School of Media Arts

UOC6 HPW3

This subject focuses on creative writing and visual storyboarding as a means for extending the student's imaginative and conceptual approach to digital production. Classes will comprise workshops and individual

and group projects covering issues of writing for both single screen and interactive works. Students will engage with issues of dialogue and voiceover texts, script and character construction, and storyboarding, mapping and visual description. The subject enriches the students comprehension of the creative process necessary to the generation of video or digital media works.

SOMA2651

Advanced Analogue and Digital Animation

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1309 or SOMA1608 or SOMA1651 or SOMA1681 or SOMA2815.

The course seeks to develop traditional animation skills and explore their application to digital media. These basic conceptual-physical skills are placed in a context of the independent experimental producer-artist. The course is designed to develop timing skills which can be applied to various forms of animation. Allied to this is a rigorous understanding of the different forms of techniques and media. An emphasis is placed on the ability to work across different media in one major project.

SOMA2681

Advanced Multimedia Computing

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1681.

This course enable students to develop concepts and techniques of multimedia production which utilise the computer to assemble sound, text and images in order to develop time based art which is innovative, challenging and pertinent. By exploring a theoretical overview and gaining relevant skills, the student will develop original web based interactive works.

SOMA2814

Cinematography

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1312 or SART1402

The cinematography workshop offers students grounding in the technical operation of cameras and lighting equipment and explores related conceptual issues. Attention is focused on control of the media through an understanding of framing, lighting, and film stock. Areas of concern include camera operations, film language, exposure, lighting, camera mounts, frame speed, filters, printing and the laboratory process. Classes include demonstrations and workshops, treatments, discussions and tutorials, review and critique.

SOMA2815

Introduction to Digital Imaging

School of Media Arts

UOC6 HPW3

In this studio workshop the student is introduced to the basic concepts and future possibilities of digital imaging processes. The emphasis is on the integration of digital technologies into visual arts practices. The subject opens up for consideration a range of digital applications suitable for extending image production and visualisation. The student is introduced to the practice and methods of production of contemporary artists who utilise a variety of digital technologies in their work.

SOMA2854

Vector Graphics in Visual Arts

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2815 or SOMA2811 or SOMA1521 or SOMA1312

In this studio workshop the student explores advanced photo-based digital imaging techniques, and is introduced to interrelated software suitable for the production of illustration, graphic based images, and artist's publications. The emphasis is on the integration of digital imaging as utilised in visual arts practices. The course advances the student's skills for image production, visualisation and presentation.

SOMA2858

Narrative and Gameplay

School of Media Arts

UOC6 HPW3

Starting from the nature of traditional narrative and story structure, this course provides intensive hands-on work in the understanding and

development of creative design documents for films, games and other interactive media. It focuses especially on the intersection of narrative, gameplay and interactivity, and how these concepts are translated into a design document. Students spend time analysing the components of different media, before developing an original design idea.

SOMA2859

Video Production Studio

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA1603.

This course provides an intensive and progressive grounding in advanced aspects of video production. The techniques are equally applicable to film.

The course covers areas of script analysis, breakdown/blocking, production management/budgeting, location sound/lighting and post production pathways. The aim is to provide a complete production experience. The course takes place in the studio context, and so students are faced with making practical choices and applying the extended suite of skills taught in the course to their production practices.

While based in narrative production, the applicability of the techniques to documentary filmmaking is also demonstrated and discussed. Students completing the course will have developed their production expertise, understanding of on set protocol and ability to complete projects with a high degree of professionalism.

SOMA3341

Photomedia 4A - Analogue Studies

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2331

This studio based course centres upon the student's development of a self-initiated body of work that demonstrates an understanding, exploration, and refinement of the concepts central to their practice. This course will address and critically refine the knowledge students have gained in Photomedia 1A - 3A. Students will concentrate on developing a body of work that demonstrates an understanding and refinement of concepts and contexts central to their individual art practice. The works produced will be an investigation of research possibilities and this investigation is initiated by the student and undertaken with lecturer supervision. It is expected that students continue to refine and advance their analogue technical skills to a standard appropriate to the concerns in their work. Students are directed toward an analysis and critical awareness of current visual arts practices and issues. Issues of production and documentation within the contemporary visual arts and media arts industry are emphasised.

SOMA3344

Time Based Art 4A

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2334.

This course furthers the students knowledge of the art historical contexts and inter-disciplinary skills necessary to time based art practices. Students are expected to develop an area of research relevant to their individual art practice. The students concentrate on producing a substantial body of work which demonstrates an understanding and refinement of the concepts and contexts central to their work. Specialised content extend the students technical and conceptual skills in the use of film, video, audio and multi-media computing technologies. Concurrently, the subject deepens the students critical comprehension of time based forms through study and analysis of different art works in the screening and presentation programs.

SOMA3351

Photomedia 5A - Analogue Studies

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA3341

In this course students focus on the production and resolution of a substantial body of work that demonstrates a refinement of the concepts and contexts central to their individual art practice, skills and knowledge base. The works produced represent a culmination of intensive studio research and study within the area of photomedia. The investigation is initiated by the student and undertaken with lecturer supervision. Students will concentrate on the professional resolution of projects initiated in Photomedia 4B. It is expected that students will refine their analogue

technical skills to the highest standard appropriate to the concerns of their work and that the final work evidences a process of research, analysis and critical awareness. This process will require a significant knowledge of new media theory, interdisciplinary arts and contemporary photographic practice.

SOMA3354

Time Based Art 5A

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA3344

Students produce a substantial project which demonstrates an understanding and refinement of the concepts and contexts central to their work and are expected to develop an area of research relevant to their individual art practice. Students refine their technical and conceptual skills in film, video, audio or multimedia computing. Concurrently, the course supports the students critical comprehension of time based forms through study and analysis of different art works in the screening and presentation program.

SOMA3361

Photomedia 4B - Digital Studies

School of Media Arts

UOC6 HPW3

This studio based course centres upon the student's development of a self-initiated body of work that demonstrates an understanding, exploration, and refinement of the concepts and knowledge students have gained in Photomedia 1B and 3B. Students will concentrate on developing a body of work that demonstrates an understanding and critical refinement of concepts and contexts central to their individual art practice. The works produced will be an investigation of research possibilities and this investigation is initiated by the student and undertaken with lecturer supervision. It is expected that students will continue to refine and advance their digital skills to a standard appropriate to the concerns in their work. Students will be directed towards analysis and critical awareness of current visual arts practices and issues. Issues of production and documentation within the contemporary visual arts and media arts industry are emphasised.

SOMA3364

Time Based Art 4B

School of Media Arts

UOC6 HPW3

This course further develops conceptual and technical skills towards a substantial body of work in time based art. A synthesis of previously gained knowledge and experience is encouraged to increase the sophistication and depth of the individual research. Individual projects in: experimental film, video art, performance, time based installation, interactive multimedia and experimental sound will be developed to a higher technical and conceptual level.

SOMA3371

Photomedia 5B - Digital Studies

School of Media Arts

UOC6 HPW3

In this course students focus on the production and resolution of a substantial body of work that demonstrates a refinement of the concepts and contexts central to their individual art practice, skill and knowledge base. The works produced represent a culmination of intensive studio research and study within the area of photomedia. The investigation is initiated by the student and undertaken with lecturer supervision. Students will concentrate on the professional resolution of projects initiated in Photomedia 4B. It is expected that students will refine their digital technical skills to the highest standard appropriate to the concerns of their work and that the final work evidences a process of research, analysis and critical awareness. This process will require a significant knowledge of new media theory, interdisciplinary arts and contemporary photographic practice.

SOMA3374

Time Based Art 5B

School of Media Arts

UOC6 HPW3

The course investigates contemporary research practices in time based art (experimental film, video art, interactive animation, sound art, installation) focussing on studies of recent research developments. Students employ a diverse range of media technologies in the development of a body of

artwork or a major project developed from a research theme of their own choice.

SOMA3521

Advanced Analogue Photography

School of Media Arts

UOC6 HPW3

The aim of this course is to develop skills through the direct participation in intellectual and technical processes relevant to the field, and to create Photomedia based works of an increasingly professional standard. Students explore the possibilities of image-making processes by the acquisition of advanced photographic technical skills including: further techniques for B/W film, processing and printing; colour photography and printing techniques. This technical knowledge is advanced by the development of the student's critical awareness of contemporary visual arts practice through the completion of set projects.

SOMA3551

Sound Media 3

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA3615 or SOMA2837.

Sound Media 3 allows students to further develop principles, techniques and applications of sound technology and theories that have been introduced in the previous two levels of sound courses to art practice. Comprised of lectures, a screening and listening program, individual and group work, and consultation processes, the course expands upon techniques and ideas in soundscape; sound design and sound/music scores for audio/visual works; MIDI composition, synthesis and surround sound. Students will develop and complete individual projects, across those audio strands that are relevant to their practice.

SOMA3603

Digital Video 2

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Building on the various production techniques and concepts explored within Digital Video 1, this course seeks to develop students' knowledge through specific project work, with technical concentration on further pre-production and post-production techniques and critical assessment of contemporary and historical film and video practice.

SOMA3608

Digital Composite 3

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2608.

Digital Composite 3 will consolidate students understanding of the digital manipulation process. Students will explore the full range of imaging possibilities, utilising hi-resolution capture devices and software. This class will explore creative visualisation possibilities. Students will be encouraged to extend the notion of composite work into other digital media outcomes including: 3D texture maps and VR possibilities.

SOMA3609

3D Modelling and Animation 2

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2609.

This course assumes prior knowledge of 3D and builds upon the skills developed in SOMA2609. This course extends the student's experience of 3D with higher-level character creation, character control and animation. Photorealism is also explored through the illustration of more advanced texture application, lighting and rendering techniques. Integration of 3D into other digital media is further developed through compositing techniques and camera control.

SOMA3610

Digital Studio

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The digital studio course has been established for students to consolidate their various digital media practices. This course is designed to encourage

student speculation experimentation and then creative development into a mature outcome. Students are supported in their area of research, within an environment that encourages collaboration across divergent media and practice.

SOMA3611

Industry Placement

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The Industry Placement program is seen as a critical component of the BDM. Students are placed into appropriate industry settings, either nationally or internationally. The Industry placement program will test students ability within the contemporary Digital Media environment. Each student will have a Lecturer assigned to him or her.

SOMA3612

Professional Portfolio

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The professional portfolio course seeks to offer students the opportunity to develop a portfolio of work at an industry standard. This course will encourage students to focus on a discrete body of work that will assist them in realising their career goals. The portfolio could be of a specific nature i.e. reflective of the student's own disciplinary strengths and interests.

SOMA3615

Sound Media 2

School of Media Arts

UOC6 HPW3

Prerequisite: SOMA2602 or SOMA2551 or SOMA2812.

"Sound Media 2" more closely examines both audio/visual relationships and sound/music genres, while expanding upon the techniques and ideas taught in the previous semester. Both individual and group projects will be based around the sound design and sound/music score of audio/visual works created within other classes, with an option to create further "stand-alone" sound/music works. The relationship of sound to editing within time-based and interactive works will be examined. Technical knowledge of sound recording and editing will be refined, with a concentration on working between audio/visual programs such as Final Cut Pro, Flash and Dreamweaver. Further techniques such as MIDI composition and analogue synthesis will be explored. A screening and listening lecture program will examine further sound/music pieces, installations and soundtracks.

SOMA3616

Professional Practice

School of Media Arts

UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course will provide students with a range of strategies and skills that will prepare them for working in a dynamic fluid industry. Professional practice will equip students with the skills knowledge and attitudes that will assist them to develop their practice as professionals, whether in employment or self employed. Industry professionals will at times be invited to address students. Topics such as documenting work, copyright, intellectual propriety, ethics, and taxation will be addressed around the core of project management and development.

SOMA3858

Advanced Studio Lighting

School of Media Arts

UOC6 HPW3

This course introduces the student to advanced techniques in studio lighting and their creative applications. The course focuses on the use of artificial lighting techniques for studio lighting set-ups in addition to specific lighting techniques for portraiture and still life. The student is required to have knowledge of basic lighting techniques; B/W and colour photography; 35 mm camera operation; film exposure and processing; and print production. The emphasis is on the development of new technical skills central to the production and advancement of the student's work. Projects are set which focus on the production of photographic images for contemporary visual art works.

SOMA3860**Advanced Digital and Web Media**

School of Media Arts
UOC6 HPW3

In this lecture and studio based course, students will explore the integration of photo-based digital imaging techniques in conjunction with web-based production and delivery. Students will learn to create their own website through a combination of basic html and web production software packages, as well as elementary animation techniques. The emphasis is on the integration of digital technologies as utilised in visual arts practices. The course advances the student's skills for image production, visualisation, interface design and presentation utilising the web as a platform for delivery.

SOMA4045**BDM Honours Studio Practice 1**

School of Media Arts
UOC12 HPW3

Prerequisite: 3 years undergraduate Bachelor of Digital Media (BDM) - see BDM rules.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study, of which Honours Studio Practice 1 is the first half. In their Honours year students undertake self-nominated research into areas of Digital Media. The aim of the Honours year is to provide the Honours student with the opportunity, through critical inquiry and practice, to develop a research project that is presented at the end of the year as a project and research paper.

The Bachelor of Digital Media encourages a diverse range of media practice and recognises the potential complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate, collaborative work.

SOMA4046**BDM Honours Studio Practice 2**

School of Media Arts
UOC18 HPW3

Prerequisite: SOMA4045.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study, of which Honours Studio Practice 2 is the second half. In their Honours year students undertake self-nominated research into areas of Digital Media. The aim of the Honours year is to provide the Honours student with the opportunity, through critical inquiry and practice, to develop a research project that is presented at the end of the year as a project and research paper.

The Bachelor of Digital Media encourages a diverse range of media practice and recognises the potential complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate, collaborative work.

SOMA4609**3D Modelling and Animation 3**

School of Media Arts
UOC6 HPW3

Prerequisite: SOMA3609.

This is an advanced course which assumes prior knowledge of 3D and builds upon the skills developed in SOMA3609. It will take you through the production and development of a short computer generated character animation. Sophisticated character control and facial animation systems will be illustrated culminating with the completion of a major studio project in animation.

SPAN1001**Introductory Spanish 1A**

Department of Spanish & Latin American Studies
UOC6 HPW6

Excluded: GENT0435, SPAN1000, SPAN1020, SPAN1021, SPAN1100

For students who have little or no knowledge of Spanish. Intended to give students a sound basis of spoken and written Spanish and to introduce them to the history and culture of Spain and Latin America. Five hours language and one hour civilisation lecture. All language teaching is in tutorial groups.

Note: All students enrolled in SPAN1001 must attend a first meeting for information and organisation of tutorial groups. See Department noticeboard for details.

SPAN1002**Introductory Spanish 1B**

Department of Spanish & Latin American Studies
UOC6 HPW6

Prerequisite: SPAN1001; Excluded: SPAN1000, SPAN1020, SPAN1021, SPAN1100

Intended to give students a sound basis of spoken and written Spanish and to introduce them to the history and culture of Spain and Latin America. Five hours language and one hour civilisation lecture. All language teaching is in tutorial groups.

SPAN2003**Intermediate Spanish A**

Department of Spanish & Latin American Studies
UOC6 HPW5

Prerequisite: SPAN1000 or SPAN1100 or SPAN1002; Excluded: SPAN2001

Two hours audio/visual comprehension and two hours of grammar/reading/written expression, plus one hour of cultural studies.

SPAN2004**Intermediate Spanish B**

Department of Spanish & Latin American Studies
UOC6 HPW5

Prerequisite: SPAN2001 or SPAN2003; Excluded: SPAN2002

Two hours audio/visual comprehension and two hours of grammar/reading/written expression, plus one hour of cultural studies.

SPAN2406**Modern Spain: From Loss of Empire to European Integration**

Department of Spanish & Latin American Studies
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: EURO2411

An overview of Spain's turbulent history following loss of empire, including the Spanish Civil War and the Franco dictatorship. Most attention is given to the nation's transformation since 1975 (the death of Franco and the return to democracy) and its enthusiastic embrace of Europe. As a peripheral European nation, and one that has been driven by cultural, political and economic conflicts in the recent past, Spain may well constitute a litmus test for the viability of European unity.

SPAN2421**Special Topic in Latin American History 1**

Department of Spanish & Latin American Studies
UOC6 HPW3

Prerequisite: 36 units of credit

In unusual circumstances a special topic in Latin American history may be chosen by the student, in close consultation with the lecturer, to pursue a particular area of interest. Weekly tutorials and written work.

SPAN2425**The Americas before Columbus**

Department of Spanish & Latin American Studies
UOC6 HPW3

Prerequisite: 36 units of credit

Examines the development of human societies in the Americas from their arrival to the great empires of the Aztecs and the Incas. The emphasis is on agriculturally based societies including the Olmec, Teotihuacano, Maya and Aztecs of Mesoamerica, the Chavin, Nazca, Moche and Inca of South America and the Anasazi and Mississippian mound builders of northern America.

SPAN2428**(Un)Making the Third World: History and Global Development B**

Department of Spanish & Latin American Studies
UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2010, GLST2101, HIST2040, HIST2060, SPAN2424

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

SPAN2429**(Un)Making the Third World: History and Global Development A**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: COMD2020, GLST2102, HIST2061, INST2000

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

SPAN2431**The United States and Changing Global Orders**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: GLST2103, HIST2510

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

SPAN3003**Advanced Spanish A**

Department of Spanish & Latin American Studies

UOC6 HPW4

Prerequisite: SPAN2002 or SPAN2004 at credit level; Excluded: SPAN3001

Two hours grammar, one hour aural comprehension, one hour audiovisual.

SPAN3004**Advanced Spanish B**

Department of Spanish & Latin American Studies

UOC6 HPW4

Prerequisite: SPAN3001 or SPAN3003; Excluded: SPAN3002

Two hours grammar, one hour aural comprehension, one hour audiovisual.

SPAN3040**Spanish Linguistics**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: SPAN1020 or SPAN2004 or SPAN1021

Aims to provide students with a knowledge of the norms and structure of the Spanish language and its use. The course focuses on the areas of Spanish phonology, morphology, grammar, pragmatics and semantics. It will be very helpful for students wishing to pursue the language to translator level.

Note: The language of instruction is Spanish.

SPAN3339**Latin American Culture and Globalisation: De Macondo a McOndo**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: SPAN2003

Examines the formation of new identities in Latin America resulting from the neoliberal politics and globalisation that have swept the continent since the early 1990s. This process is evaluated through the study of Latin American and Latino literary texts that reflect this change, which is best captured through the image of transformation of the mythical and exotic village Macondo of Gabriel García Márquez into the postmodern global village McOndo defined by Macintosh computers, McDonalds, shopping malls, the Internet and cell phones. Examines the contradictory logic of globalisation that on the one hand "flattens" cultural differences but on the other creates real opportunities for breaking down cultural barriers and overcoming provincialism.

Note/s: The course is offered in Spanish.

SPAN3343**Topics in Latin(o) American Cinema**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Examines key issues in Latin(o) American cinema, including the construction of gender and sexuality, questions of race and ethnicity, the representation of border issues, migration, urban life, and youth culture. Focuses on films within the cultural and social contexts of their production, and in the light of current theories of film. Shows how these films stand in strong contrast to the traditional and often stereotypical image of Latin America and Hispanics fabricated by Hollywood.

Note/s: Taught in English. Knowledge of Spanish is desirable but not required. All readings are in English and all films are subtitled.

SPAN3345**Spanish as a World Language**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Examines the cultural contexts of the evolution of what today is called Spanish. Investigates and discusses the two themes of orthodoxy and syncretism commencing with the multicultural nature of the Iberian peninsula prior to the rise of Castellano, the dialect spoken in a small kingdom in central Spain, to be a national and a world language. Explores the spread of the language to the Americas, Africa, and Asia in the contexts of conquest, wealth accumulation, and Christianisation.

SPAN3401**Colonising the Americas: The Spanish and Portuguese Empires**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit

Provides an introduction to the history of the Spanish empire in the Americas from the sixteenth century to the early nineteenth century. The major trends, events and processes of the colonial era are examined, up to and including the wars of independence in the early nineteenth century. The colonial history of Brazil is also covered. Apart from a comparison of Portuguese and Spanish America, an attempt will be made to compare the rise and decline of the Spanish and Portuguese empires with the vicissitudes of English colonialism in the Americas.

SPAN3422**Special Topic in Latin American History 2**

Department of Spanish & Latin American Studies

UOC6 HPW3

Prerequisite: 36 units of credit

In unusual circumstances a special topic in Latin American history may be chosen by the student, in close consultation with the lecturer, to pursue a particular area of interest. Weekly tutorials and written work.

SPAN4000**Spanish and Latin American Studies Honours Full-Time**

Department of Spanish & Latin American Studies

UOC24 HPW5

Prerequisite: 54 units of credit in SPAN at an average of 70% and permission from Head of Department

Language and Literature: 2 seminars and a thesis. History: 2 seminars and a thesis.

SPAN4050**Spanish and Latin American Studies Honours Part-Time**

Department of Spanish & Latin American Studies

UOC12 HPW3

Prerequisite: 54 units of credit in SPAN at an average of 70% and permission from Head of Department

Language and Literature: 2 seminars and a thesis. History: 2 seminars and a thesis.

SPAN4500**Combined Spanish and Latin American Studies Honours**

Department of Spanish & Latin American Studies

UOC12 HPW2

Prerequisite: 48 units of credit in SPAN at an average of 70% and permission from the Head of Department

1. Research Project or thesis, whose course and nature have been approved by the two Schools or Departments concerned.
2. 1 or 2 seminars. Students of Language and Literature who did not complete SPAN1021/SPAN1022 in Year 1 may be required to study a language course as one of their seminars. The exact details of this program and its assessment are subject to prior consultation with and approval by the Heads of the two Schools or Departments concerned.

SPAN4550**Combined Spanish and Latin American Studies Honours**

Department of Spanish & Latin American Studies

UOC6 HPW2

Prerequisite: 48 units of credit in SPAN at an average of 70% and permission from the Head of Department

1. Research Project or thesis, whose course and nature have been approved by the two Schools or Departments concerned.
2. 1 or 2 seminars. Students of Language and Literature who did not complete SPAN1021/SPAN1022 in Year 1 may be required to study a language course as one of their seminars. The exact details of this program and its assessment are subject to prior consultation with and approval by the Heads of the two Schools or Departments concerned.

TAHM9999**The Attraction of Australia: Tourism & Recreation Management**

School of Marketing

UOC12

Refer to School of Marketing.

TELE1010**Introduction to Telecommunications**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

The lecture program for this course has three themes. The first lectures provide an introduction to the practice of telecommunications engineering. Key skills and knowledge in safety, technical communication and information gathering are discussed. Also covered are issues of what engineers do, the wider context in which engineers operate and their obligations to society. Several lectures also explore the key engineering theme of engineering systems. Many of the latter course lectures will be given by guest speakers from industry, and will introduce you to the world of telecommunications engineering. Your ability to learn from and summarise the visitors' lectures will be included in the material assessed in the examination. A number of lectures will also be given by different lecturers from the School of Electrical Engineering and Telecommunications covering basic communications theory, computing, data networks, the Internet, electronics and communications systems.

TELE3013**Telecommunication Systems 1**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: ELEC2032.

To present a general introduction to telecommunications aspects such as signal acquisition, transmission and processing in communication systems. This subject is intended for telecommunication engineering students as a necessary background, and also for electrical or computer engineering students not specialising in telecommunications as a general knowledge. Characteristics of typical communication channels. Typical signals (speech, audio, video, data) and their characteristics. Basic analogue and digital techniques. Key techniques in handling transmission system issues (modulation, coding, multiplexing. System performance and evaluation (channel noise, intersymbol interference, bit error rate). Major communication systems including telephony, radio, TV, satellite, mobile phone, optical fibre, radar and networks.

TELE3015**High Frequency Electromagnetics**

School of Electrical Engineering and Telecommunications

UOC3 HPW3

Prerequisite: PHYS2939 or PHYS2949.

Maxwell equations & electromagnetic waves; polarization & TEM waves; plane & spherical waves. Interference principles. Energy & power in waves. Group velocity dispersion & group delay. Dielectric materials & transmission; conducting materials & shielding; nonlinear interactions; anisotropic materials. Transmission lines from circuit & electromagnetic viewpoints; transmission line circuits. Metallic & dielectric waveguides;

waveguide modes. Dipole, array, dish & aperture antennas. Some health & environmental considerations.

TELE3018**Data Networks 1**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: (COMP1021 & ELEC1041) or (COMP1021 & COMP2021)

An overview of computer networks. Basic concepts in the physical layer: signals and data, transmission media, data encoding schemes. Issues in the data link layer: Error correction and detection, flow and error control and shared medium access schemes. Concepts in the network layer: introduction to the Internet Protocol (IP), IP addressing, classical IP subnetting technique and IP routing. Transport layer concepts: introduction to the Transport Control Protocol (TCP) and User Datagram Protocol (UDP). The operation of the different Internet applications: HTTP, DNS, FTP, SMTP and Internet multimedia streaming applications.

TELE4313**Optical Communications**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3013; Excluded: ELEC9350 and ELEC8350

Wave propagation in optical fibres. Gaussian approximation of fields in single-mode fibre, spot-size, equivalent step index fibres. Material, waveguide and intermodal dispersion. Polarisation and birefringent fibres. Ray theory in multimode fibre. Optical fibre measurement and characterisation. Launching efficiencies in fibres. Fibre-based devices. Nonlinear and anisotropic effects.

TELE4314**Optical Communication Systems**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE4313 Excluded: ELEC9355 /ELEC8355

Digital and analogue optical communication systems; fibre connections and losses; fibre-device coupling; WDM systems; optical modulation; optical components; optical networks.

TELE4323**Digital Modulation and Coding**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3013

Brief review of key concepts from signal processing, linear systems, sampling theory and source coding. Digital transmission through AWGN channels. Baseband signalling and pulse shaping. Carrier amplitude, phase and frequency modulation techniques. Spread spectrum modulation. Carrier and clock synchronisation. Channel capacity. Forward error correction coding. Applications of these techniques in typical digital communications systems.

TELE4333**Wireless Data Communication Systems**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3013; Excluded: TELE9343

Introduction to wireless technologies. First, second and third generation wireless networks. MAC technologies for wireless, packet switching, circuit switching, burst switching. Radio resource allocation and cellular systems. GSM architecture: routing and flow control protocols, mobility management. High-speed circuit-switched data (HSCSD) services. General Packet Radio Service (GPRS). Enhanced data for global evolution (EDGE) and global third generation (G3G). Wireless local area network (WLANs) - IEEE 802.11 and Hiperlan standards. Broadband wireless access (BWA). Application of wireless services. Future wireless services and software radios.

TELE4352**Data Networks 2**

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3018; Excluded: TELE9302

Design, analyse and evaluation performance. Effectiveness, cost and customer control. Personal Communication Services (PCS), Frame Relay, Asynchronous Transfer Mode (ATM), SONET/SDH and Switched Multimegabit Data Services (SMDS). Protocol modelling and verification

techniques. Asynchronous Transfer Mode (ATM). ATM LANs, multimedia communication. Analysis of protocols for data link, network and transport layers. Network design. Frame Relay. Switched Multimegabit Data Services (SMDS). Operating system views of communication.

TELE4353

Mobile and Satellite Communication Systems

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3013; Excluded: TELE9344.

Modern communication systems from a systems point of view. Cellular mobile communication systems. Propagation-loss model. The mobile fading channel. Multiple access techniques. The GSM. Digital satellite communication systems. Satellite orbits. Station keeping. Multiple access techniques. System synchronisation. DAMA. Satellite packet communication. Mobile satellite networks.

TELE4354

Network Management

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3018; Excluded: TELE9303

This course will introduce students to methods, techniques and tools for the management of telecommunication systems and networks with specific examples from Internet and the public switched telecommunication networks. It will introduce the fundamental concepts of SNMP. Then it will examine QOS management mechanisms and mobility management in IP networks. Finally it examines the concepts of content distribution networks.

TELE4363

Telecommunications Systems 2

School of Electrical Engineering and Telecommunications

UOC6 HPW4

Prerequisite: TELE3013; Excluded: TELE9301

This course provides a fundamental coverage of important communication systems, their basic components, as well as legal and commercial aspects affecting the design and operation of these systems. This subject is intended for students who wish to major in telecommunications or to strengthen their knowledge of modern communication systems. Basic principles of guided and unguided wave propagation. Transmission aspects of voice telephony, digital networks signalling, CCITT signaling system no.7, Asynchronous Transfer Mode (ATM), Advanced Broadband Digital Transport Formats. Broadcast radio and TV systems. Cable systems. Introduction to mobile and satellite communications.

TELE4910

Thesis Part A

School of Electrical Engineering and Telecommunications

UOC3 HPW4

Prerequisite: 132 units of credit and weighted average mark of 65 & ELEC3017.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4910. Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will be required for Part B.

TELE4911

Thesis Part B

School of Electrical Engineering and Telecommunications

UOC9 HPW10

Prerequisite: TELE4910.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4910. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which TELE4911 is taken.

TELE4914

Group Thesis Part A

School of Electrical Engineering and Telecommunications

UOC3 HPW4

Prerequisite: ELEC3017 and 132 units of credit.

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4914. Group Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will be required for Group Thesis Part B.

TELE4915

Group Thesis Part B

School of Electrical Engineering and Telecommunications

UOC9 HPW10

Prerequisite: TELE4914

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4914. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which TELE4915 is taken.

VISN1211

Vision Science 1

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: BIOS1201

Objectives: An understanding of the anatomy of the eye, ocular adnexa and visual system. This course also provides students with an introduction to the Learning Skills and Graduate Attributes required by optometrists.

Brief Curriculum: Introduction to the gross anatomy of the head, brain, eye and adnexa; introduction to microscopic anatomy of the components of the eye and visual system; practical demonstrations of ocular anatomy using clinically relevant examination techniques; tutorials on information literacy, communication skills, problem solving and learning skills.

VISN1231

Optics 1

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: PHYS1211, MATH1131

Objectives: An understanding of physical and geometrical optics with an introduction to ocular refractive error.

Brief Curriculum: Physical optics: the wave nature of light, interference, diffraction, polarisation; Geometrical optics: refraction, reflection, analysis of lens systems - thin lenses, thick lenses, optical systems with multiple surfaces, magnifiers, telescopes, apertures, stops, pupils; Model eyes: standard reduced eyes, 3-surface schematic eyes; Introduction to ametropia.

VISN2111

Vision Science 2A

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN1211

Objectives: An understanding of the physiology of the eye and visual system.

Brief Curriculum: Physiology of the eye including the lacrimal system, eyelids, adnexa, cornea, uvea, lens; Physiology of the visual system including the retina, retinal pigment epithelium, visual pathway, cortex; Control of eye movements; Neural and pharmacological control of the pupil; Streaming of visual information.

VISN2131**Optics and the Eye**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN1231

Objectives: An understanding of the optical performance of the eye, the optics of refraction, the optics of spectacle lenses and the measurement of light and colour.

Brief Curriculum: Ametropia and its correction: refractive error, the optics of subjective refraction, accommodation, optometers; The optics of spectacles lenses: spectacle magnification, ophthalmic prisms, lens forms; Factors influencing visual performance: ocular aberrations, analysis of the retinal image, modulation transfer function, entoptic phenomena; Measurement of Light and Colour: sources of optical radiation, sunlight and daylight, detectors, principles of photometry, principles of colour measurement and specification, uniform colour scales, colour rendering, metamerism, colour atlases and order systems.

VISN2211**Vision Science 2B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN2111

Objectives: An understanding of processing in the visual system.

Brief curriculum: Spatial vision: visual acuity, contrast sensitivity, aliasing, alignment thresholds; Colour vision: retinal and cortical processing, colour constancy, colour identification; Binocularity: models of depth perception, correspondence, Panum's area, horopter, stereoacuity, monocular depth perception, summation, stereopsis tests; Motion perception: models of motion perception, adaptation, directional selectivity, first and second order motion; Cognition: shape recognition, face perception, visual illusions, visual hallucinations, visual attention, visual search and pop-out.

VISN2231**Introduction to Ocular Disease**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN2111

Objectives: An understanding of the basic mechanisms of disease as they relate to the eye.

Brief curriculum: Microbiology: microbial identification, bacteria, viruses, fungi, parasitic infection, prions, epidemiology of infection, infection control, common ocular infections; Immunology: cells of the immune system, normal and abnormal function; Disease processes: cell injury, adaptation, hypoxia, ischemia, inflammation, cell growth, vascular disease, atherosclerosis, neoplasia, aging, genetic abnormalities, diabetes, hypertension, intracranial disease.

VISN3111**Vision Science 3A**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN1211

Objectives: An understanding of the development and aging of the visual system. The effect of disease on the visual system is briefly discussed.

Brief curriculum: Development of the visual system: embryology of the eye and brain, axon pathfinding, receptive field development, development of the visual cortex, critical periods, plasticity, reorganisation of cortical inputs; Development of vision: spatial vision, colour vision, motion perception, shape perception, binocularity; Ageing: physiology of aging, effect of age on brain function, effect of age on the visual system, effect of age on vision; Effect of disease: the effects of brain injury, retinal disease, refractive error, amblyopia and drugs on visual perception are briefly covered.

VISN3131**New Concepts in Optics**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN2131

Objectives: An understanding of the new developments occurring in visual optics and ophthalmic design. **Brief curriculum:** Application of laser to the eye: refractive surgery, retinal surgery, scanning laser ophthalmoscopes, wavefront sensing; New developments in optical appliances: adaptive optics, holograms, light guides, diffraction optics, variable refractive index lenses, image enhancement technology.

VISN3211**Vision Science 3B**

School of Optometry and Vision Science

UOC6 HPW6

Prerequisite: VISN3111

Objectives: An understanding of the new developments occurring in vision science.

Brief curriculum: A review of interesting topics in modern visual science. Topics to be discussed may include: animal vision, machine vision, retinal implants for people with visual impairment, blind sight, stem cell implantation, cures for myopia, cures for presbyopia.

A portion of this course deals with public health issues in vision: the importance of epidemiological and clinical trial research, vision loss in the developing world, preventable vision loss, eye care in Australia's indigenous communities.

VISN4003**Vision Science Honours**

School of Optometry and Vision Science

UOC48 HPW2

Advanced training in selected areas of vision science, including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

Restricted to Vision Science study plan in program 3970 BSc.

WOMS1001**Introduction to Feminism**

School of English

UOC6 HPW3

Introduces students to some key areas of feminist thought and to questions of sex and gender. There will be a focus on questions of representation and on differences and conflicts within feminism.

WOMS1003**Women, Gender and World History**

School of History

UOC6 HPW3

Excluded: GLST1200, HIST1020

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

WOMS2003**A History of Sexualities**

School of History

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: HIST2760

Begins with Classical Greece and establishes some important themes concerning gender, sex and culture which will be traced through the intervention of colonisation, Christianity, and the development of social sciences from the 18th century; traces the relationship between sexuality and socio-political control in the 19th and 20th centuries; investigates the shaping of sexualities through art, literature, cinema and media as well as pornography; and looks beyond the infamy of Lesbos, Mary Magdalen, the Marquis de Sade, Oscar Wilde, Margaret Mead, and Monica Lewinsky, amongst others, to uncover a rich history.

WOMS2004**Sex, Human Rights and Justice**

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: AUST2025, POLS2020

Examines thought and practices of human rights in connection with questions of sex and sexual relations. Conceptions of equality, autonomy and freedom will be examined, with some reference to classic liberal expositions of justice and the rights of the person. Areas include discrimination and harassment, abortion, prostitution and sexual slavery,

pornography, sexual violence and rape. Attention will be given to both domestic and international policy in these areas.

WOMS2005

Society and Desire

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA2205, SOCC2201

The subject of desire is an especially curious one because it makes us think about the nature of the human condition. The perception of difference is an erotic process through which we are forged as bodily beings whose identities are constantly shifting. Explores how our sense of self emerges in relation to others. How we divide our own bodies into alien parts that may delight or repulse us is part of a larger social process that includes how we experience the world, how we live our sex, sexuality and cultural difference. Will draw on several continental thinkers.

WOMS2006

Sexuality and Power: The Social Relations of Sex and the Sexes

School of Politics and International Relations

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: POLS2041, POLS3049

Introduces some of the main theories of power and of sexuality; analyses different sexualities, and issues relating to sexuality, in the context of theories of power. Topics include compulsory heterosexuality; the construction of masculinity, femininity and desire; marriage and prostitution; sexuality and work; body politics; and pornography and popular culture.

WOMS2106

Embodiment

School of Sociology and Anthropology

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA2206, SOCC2501

We are lived bodies inhabiting a world. Addresses a range of themes which emerge when we reflect upon ourselves in this way: I am a body, yet I have a body; my body is always in communication with a world, I am both sentient and sensible; I am both bounded and open. Consideration of such themes requires an investigation of theoretical constructs of the social and cultural formations of embodied subjectivity, the relations of consciousness and flesh, habit and inhabitation, the significance of body image, relationality and emotions. Major theorists include Merleau-Ponty, Foucault, Douglas, Turner, Bachelard and Lingis. Case studies such as reproduction, sacred and profane bodies, bodybuilding and anorexia, dissociation and disembodiment, illness, will be used to enable students

to reflect upon their own embodied experience, to examine critically everyday and theoretical assumptions, and to develop skills in qualitative analysis.

WOMS3006

Crime, Gender and Sexuality

Faculty of Arts and Social Sciences

UOC6 HPW3

Prerequisite: 36 units of credit; Excluded: SOCA3409, WOMS2007, GENT1207

Examines social implications of: the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests; the intersection of criminality and sexuality (specific examples may include pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, underage pregnancy). Notions of public interest, privacy and consent in matters of gender and sex. The interaction of gender and sexuality with other stratification factors such as age, class, disability, ethnicity and race in the social construction of crime.

WOMS4500

Combined Women's and Gender Studies Honours (Research) Full-Time

School of English

UOC12 HPW2

Prerequisite: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Coordinator

Students are required to complete coursework nominated by the Coordinator. The Women's and Gender Studies component consists of a 2HPW seminar or reading program for one session. In addition, a thesis on an approved interdisciplinary topic, with joint supervision, must be submitted.

WOMS4550

Combined Women's and Gender Studies Honours (Research) Part-Time

School of English

UOC6 HPW2

Prerequisite: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Coordinator

Students are required to complete coursework nominated by the Coordinator. The Women's and Gender Studies component consists of a 2HPW seminar or reading program for one session. In addition, a thesis on an approved interdisciplinary topic, with joint supervision, must be submitted.

Glossary

Award

An award is a degree, diploma or certificate obtained when a student graduates from a program at UNSW. It recognises the student's successful completion of that program.

Bachelor

A Bachelor degree is the formal award a student receives when they successfully complete an undergraduate university degree program, ordinarily of three or more years duration.

Campus

This is the teaching location where a program, course or plan is taught. UNSW has several campuses including the main campus at Kensington, the College of Fine Arts campus in Paddington, and the Australian Defence Force Academy in Canberra.

Co-major

A co-major is part of a sequence of study for a program in which the requirements for two majors are met.

Combined Program

A combined program is a program of study which leads to the award of two degrees, that is, the graduate earns two qualifications (an example of this would be the Bachelor of Arts/Bachelor of Laws.) These are also sometimes called combined degrees. They have a single set of program rules.

Corequisite

A corequisite is a course which is linked or integrated with another course so that the two must be studied concurrently.

Course

Otherwise known as a subject, a course is an individual study unit offered within a program and plan (for example, MATH1131 - Mathematics 1A). Students enrol in many courses to make up their program of study, some of which may be core courses (courses which need to be completed to satisfy the requirements of a particular program) and some of which may be elective courses (where students are given a choice of courses). At UNSW, courses are identified by a four character alphabetic prefix which identifies the subject area or specialisation and a four digit numeric suffix e.g. ECON1101 -Microeconomics 1.

Coursework

Coursework refers to a mode of study which is largely or wholly constituted of courses involving face-to-face class instruction. It is a term which is commonly used with regard to undergraduate and postgraduate study. The other mode of postgraduate study is research.

Degree

A degree is the formal qualification awarded when a student graduates from an undergraduate program of study such as a Bachelor of Arts, or a postgraduate Masters or PhD program.

Department

See School.

Doctorate/Doctoral program

A doctoral program is a postgraduate research program where students independently research a specific topic under the guidance of a supervisor to produce a thesis. For a doctorate, considerably more original work is required than for a Masters by Research program. Students should note that in some faculties, coursework may also be prescribed.

Faculty

Faculties are the large academic organisational units of the University, and are generally comprised of several schools or departments. UNSW has eight faculties: Arts and Social Sciences; Built Environment; Commerce and Economics; Engineering; Law; Medicine; Science; College of Fine Arts. University College, ADFA, and the Australian Graduate School of Management are also regarded as faculties.

Fast-track program

UNSW offers several "fast-track" or "Masters track" programs. These give students the opportunity, if they meet progression requirements, to progress directly from an undergraduate program to a particular Masters program with some courses in the final year counting towards both qualifications e.g. the Bachelor of Engineering/Master of Commerce.

General Education

UNSW requires undergraduate students to complete some courses outside the study area of the degree program in which they are enrolled. General Education courses are offered in a variety of general subject areas to allow students to complete this requirement.

International Student

International students are citizens of a country other than Australia or New Zealand and are not Australian permanent residents.

Local Student

Local students are Australian citizens, Australian permanent residents or New Zealand citizens.

Major

Many programs require students to complete a major. A major is an approved sequence of study in an area of academic or vocational specialisation. This is also sometimes referred to as a 'plan' (see below).

Masters

A Masters program or degree is a postgraduate program where students enrol in an approved sequence of courses involving face-to-face instruction. Some Masters programs also involve a research component.

Minor

In some programs, students are required to supplement their study major (see above) with a 'minor.' This is a sequence of study in a secondary area of specialisation, comprising fewer units of credit than a major (usually 24). For example, a student enrolled in an Science degree program might complete a major in Anatomy and a minor in Zoology. Majors and minors are both examples of a 'plan' (see below).

Non-Award

Non-award enrolment means that the course/s undertaken by the student do not lead to the award of any formal degree, diploma or certificate at UNSW. Students from other universities (cross institutional students) often enrol in non-award courses at UNSW, as credit may be granted for these courses by their home institution.

PhD

See Doctorate.

Plan

A plan is a sequence of study within a program focused on a particular study area, usually requiring students to complete an approved sequence of 'core' and 'elective' courses. At UNSW, plans are identified by a five-digit alphabetical prefix and a five-digit numeric suffix e.g. SENG13648 refers to the full-time Software Engineering plan.

Postgraduate

Postgraduate programs of study are available to students who have already completed a university degree program in a related area. They offer the opportunity for students to further their skills and qualifications in a particular area of specialisation. Completion of a postgraduate program may lead to an award of a Graduate Certificate, Graduate Diploma, Masters (by Coursework or Research), Doctorate (PhD) or post-doctoral qualification.

Prerequisite

Some courses have prerequisites. A pre-requisite is a requirement which must be completed before enrolling in the course or the next level of courses e.g. completing a Level I MATH course before progressing to Level II MATH courses.

Program

A program is an approved program of study which leads to the award of a degree, diploma or certificate. Programs may be undergraduate or postgraduate and are identified by a four-digit numeric code e.g. the program code for the Bachelor of Psychology is 3432.

Research

Research programs of study are postgraduate programs of study which involve a student independently researching a specific topic under the guidance of a supervisor and producing a thesis or report. Some research programs involve a coursework component.

School

This is an academic organisational unit, also sometimes referred to as a department. Faculties may be comprised of several schools e.g. the Faculty of Arts and Social Sciences has 12 schools including the School of Philosophy and the School of History.

Session/Semester

A session or semester is a university teaching period. Each academic year, there are two main sessions (Session 1 and Session 2), usually of 14 weeks teaching, plus an examination period. There are also shorter Summer and Winter sessions that run during the breaks between the major sessions. Exceptions to this pattern are the Faculty of Medicine and the Australian Graduate School of Management whose academic years are divided into four teaching periods.

Specialisation

A specialisation is an area of academic expertise on which students' focus their studies, often by enrolling in a plan offered in that area, such as a Philosophy major within an Arts degree. Examples of specialisations include French, Biological Science, Taxation etc.

Stage

Programs are generally structured in a number of 'stages' of study, requiring students to complete a specified number of units of credit and/or a particular sequence of courses at each stage. Generally, when a student completes their degree program within the normal minimum time, the different stages will correspond with the different years of the student's enrolment (e.g. Level 1 is Year 1, Level 2 is Year 2, etc).

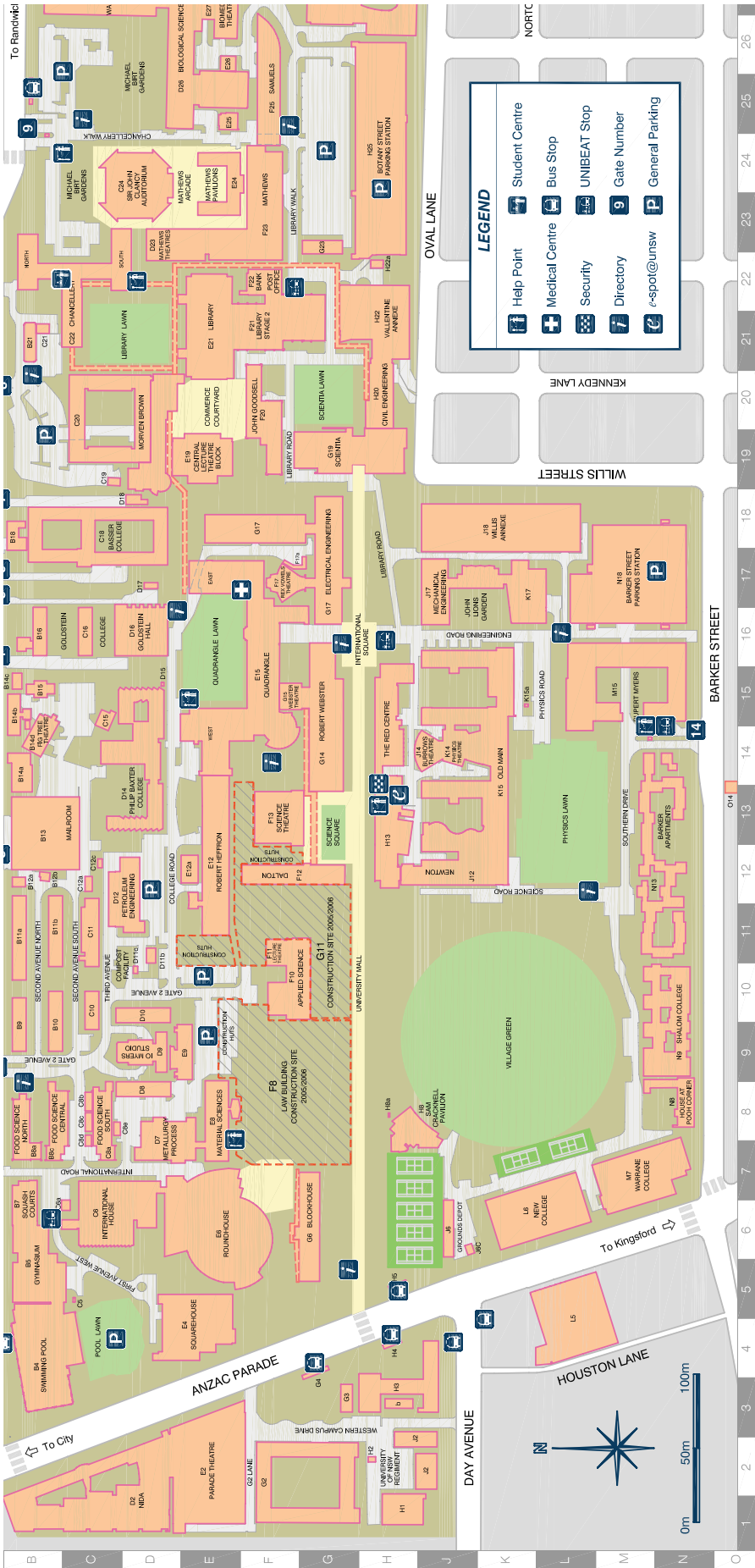
Undergraduate

Undergraduate programs of study are degree programs which do not require students to have previously undertaken university study in order to enrol. They are designed for students who have completed secondary studies (high school) in Australia or have a level of education deemed equivalent to this (e.g. equivalent overseas study or alternate entry programs).

Unit of Credit (UOC)

Each course at UNSW has a particular load or weighting which is referred to as a unit of credit e.g. the course ELEC1101 Electrical Engineering is worth 3 units of credit. This is often abbreviated to UOC. UNSW programs require the successful completion of a certain number of UOCs and fees are also charged on a UOC basis.

Maps



The University of New South Wales • Kensington Campus

The University of New South Wales • Kensington Campus

BUILDINGS

AGSM **G27**
Analytical Centre (Under Construction 2005/07) **G11**
Applied Science **F10**
Arcade **D24**
Biological Sciences **D26**
Blockhouse **G6**
Building **L5**
Chancellery **C22**
Civil Engineering **H20**
Dalton **F12**
Electrical Engineering **G17**
Food Science **B8c, C8a**
Golf House (38 Botany St.) **A27**
Goodsell **F20**
Heffron **E12**
K17 (Computer Science) **K17**
Law (Under Construction 2005/07) **F8**
Library **E21**
Library Stage 2 **F21**
Material Science **E8**
Mathews **F23**
Mechanical Engineering **J17**
Medical Administration **B27**
Metallurgy Process **D7**
Morven Brown **C20**
Newton **J12**
NIDA **D2**
Old Main **K15**
Pavilions **E24**
Petroleum Engineering **D12**
Quadrangle **E15**
Red Centre **H13**
Robert Webster **G14**
Roundhouse **E6**
Rupert Myers **M15**

Sam Cracknell Pavilion **H8**
Samuels **F25**
Scientia **G19**
Squarehouse **E4**
University Regiment **J2**
Vallentine Annexe **H22**
Wallace Wurth **C27**
Willis Annexe **J18**

RESIDENCES

Barker Apartments **N13**
Basser College **C18**
Baxter College **D14**
Goldstein College **D16**
International House **C6**
Kensington Colleges (Office) **C17**
New College **L6**
Shalom College **N9**
Warrane College **M7**

FACULTY OFFICES

Arts and Social Sciences **C20**
Australian Graduate School of Management (AGSM) **G27**
Built Environment **H13**
Commerce and Economics **F20**
Engineering **K17**
Law **F21**
Medicine **B27**
Science **F12**

THEATRES

Applied Science Theatre **F11**
Biomedical Theatres **E27**
Central Lecture Block (CLB) **E19**
Civil Engineering Theatre **G1 H20**

Clancy Auditorium **C24**
Fig Tree Theatre **B14d**
IO Myers Studio **D9**
Keith Burrows Theatre **J14**
Macauley Theatre **E15**
Mathews Theatres **D23**
NewSouth Global Theatre **G14**
Old Main Building (112) Theatre **K15**
Parade Theatre (NIDA) **E2**
Physics Theatre **K14**
Red Centre Theatre **H13**
Rex Vowels Theatre **F17**
Ritchie Theatre **G19**
Rupert Myers Theatre **M15**
Science Theatre **F13**
Webster Theatres **G15**

SERVICES

Aboriginal Education Program (47 Botany Street) **A29**
Aboriginal Research and Resource Centre **F21**
Accommodation (Housing Office) **E15**
Admissions and Enrolment - Student Centre **C22**
Alumni Association **C22**
Biomedical Library **F23**
Bookshop **E15**
Campus Conferencing **C22**
Cashier **C22**
Careers & Employment Office **E15**
Chaplains **E4**
Child Care Centres:
House at Pooh Corner **N8**
Kanga's House (52 Barker Street) **O14**
Tiggers/Honey Pot (34 Botany Street) **A28**
Co-op program **M15**
CONTACT **E15**
Counselling Service **E15**

e Spot (Security, Parking, Permits etc) **H13**
Environment Management Program **G2**
Equity and Diversity Unit **F10**
Facilities Management **B14a**
Housing Office **E15**
Human Resources **C22**
Independent Learning Centre **G23**
IT Service Desk **F21**
Law Library **F21**
Mail Centre **B13**
Medical Centre **E15**
NewSouth Global P/L **L5**
Optometry **M15**
Physiotherapy Clinic **B5**
Planning and Development **C22**
Post Office **F22**
Marketing and Development **C22**
Publishing & Printing Services **C22**
Religious Services **E4**
Research Office **M15**
Roundtable Conferencing and Catering **E4**
Security (Lost Property, Parking etc) **H13**
Sports Association **H8**
Squash Courts **B7**
Student Centre (UNSW Student Central) **C22**
Student Guild **E15**
Student Recruitment Office **C22**
Swimming Pool **B4**
Unisearch Limited **M15**
Uni Gym **B5**
UNSW Bookshop **E15**
UNSW International (Student Centre) **H13**
UNSW Student Central **C22**
UNSW Union **G6**

